PSYCHOLOGY OF MUSIC

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SANGEET NATAK AKADEMI

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Contents

Preface

In pursuance of the recommendations of the Seminar in the Science of Music (Delhi, 1970), the Akademi planned out further Symposia, Seminars, Workshops and in-depth investigations of various subjects. Researches were undertaken both at the Akademi and certain Universities with grants-in-aid from the Akademi. The results of these discussions and experiments have been published as under:

1. Report of the Seminar on the Science of Music, 1970, Sangeet Natak, Vols. 16 and 17.*
2. Report of Symposium on Musical Scales, 1973.*
3. Study of Musical Scales (<u>Sruti</u>), Research Report I.*
4. Psychological Response to Ragas, <u>Research Report II.*</u>
5. Response of Youth to Ragas, Sangeet Natak, Vol. 41.
6. Psychological Response to Ragas, <u>Monograph</u> (in preparation).

The present volume is the collection of papers read at the Seminar on the Psychology of Music which was arranged at Poona with the cooperation and collaboration of the Department of Experimental Psychology, Poona University from 12th to 15th Jan., 1975.

The papers, as arranged here, could be grouped into a few catagories.

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* Not available

The first is the question of the methodology in the resea rch of the psychology of music, particularly in relation to Indian music. Dr. Ashok Kelkar while examining the scope for psychological probes sugges... that investigations could be carried out in four areas: (a) the artiste and his activities, (b) the listener and his contribution, (c) the formation and reformation of musical sensibility, and (d) the analysis of musical work in all its aspects. Dr. Ashok Ranade makes out the point that a raga is realised in a performance, but not in a recital. This, of course, valid objections - Ed.). and the methods of affective analysis are essentially ethnocentric. The use of Western psychological techniques has therefore to be carefully examined for use Indian conditions. Dr.(Mrs) Shyamala Vanarase discusses the nature of aesthetic behaviour and its forms. She also presents some thoughts on the text, the stimulus, the organism and the responses in musical behaviour. In her paper on perception, Dr. Vanarase analyses the perceptual process of sound and musical figures.

While the above papers discuss the problems of research design and its dimension, we have another group which deals with actual audience response to Indian music. Dr. Saxena presents a paper on some characteristics of Hindustani rhythm

and raises the question of 'How, in relation to the _sama_, does our rhythm seem organised?'. Prof. Mangrulkar refers to the musician-listener relationship and the common experience of the three factors in music namely, _svara_, _laya_ and _form_. While these are more or less theoretical, Dr. Deva and Sri K.G. Virmani present the result of their experiments carried out at the Sangeet Natak Akademi on the relation of _rasa_ to _raga_. (A detailed report of this has been brought by the Akademi as Research Report II). Closely related to all these processes is the very profound concept of _rasa_ as propounded by Indian theoreticians. Prof. Jog, gives a very detailed account of some concepts of _rasa_ theory in particular relation to music. A devious line of approach relating to the above subject is the paper by Shri Prabhakar Padhye. He raises the question of the aesthetics of art in general and says that a work of art is not one of emotion, but of a rise in the level of pure energy that lies at the root of consciousness, and what one experiences is patterned energy.

The _rasa_ experience is really and truly a mystic state and Indian aestheticians as well as artistes had, at their best, understood this. Unfortunately this way of experiencing has been behind the clouds for many centuries and

it is time that we again delve into this ocean. Two papers related to this stage of art experience are included here. The first one is by Thakur Jaidev Singh who gives an account of the concept of sound in Indian musical tradition. The second one is a detailed paper on the Kundalini and its relation to sound in yoga. Though the knowledge of Kundalini is not given to all, there is no gainsaying the fact that it is a palpable process and sound experience is one of the important stages in the flow of the Kundalini. The paper by Smt. Musalgaonkar is a collection of some available data on the subject. But the addendum (in Marathi) on this very subject is by no less a knowledgeable yogi than the late Vaman Rao Gulavani. (This was not read at the Seminar, but has been included as it may of guidance to those who wish to really know).

At the other end of the spectrum, as it were, we have studies in depth psychology. The first in this section is a paper by Dr. Manas Raychaudhury who presents a summary of the results of experiments in the personality structures of musicians. It would be worthwhile to enquire whether this personality is really musical ability and whether such ability is interited. This is the problem examined by Prof. S.B.Gogate. From this we pass on to the more deeper layers of the mind and the closely related question of psychology of abnormality.

Dr. Bhattacharya draws attention to the processes of sublimation and refers to the work of Freud, Alexander, Adler and others and the views of these great scientists could well form a good bases for the study of the relation between music and the neurotic. Miss Usha Ram attempts to briefly review some of the researches carried out in the relation of music to mental retardation and Dr. C.G. Deshpande presents a paper on music therapy in general.

The dimension of the subjects presented and discussed at the Seminar are indeed very wide. The ramifications are complicated and certainly merit intensive and extensive research in relation to Indian music. Besides the various aspects of what is usually called pure research, the results will have wide implication in personality tests and vocational guidance of musicians, evolving musical talent tests and developing psytherapeutical uses of music. It is hoped that the material presented here will unduce more scientific investigations of our music.

March, 1977 B.C. Deva

UNDERSTANDING MUSIC AND THE SCOPE FOR PSYCHOLOGICAL PROBES

ASHOK R. KELKAR

Thinking about music in India inevitably tends to centre on the sastra of it. By the sastra of sangita (here understood as referring to gayana singing and vadana playing instruments rather than the third component nartana dancing), we mean here the clear enunciation and formalization of the traditional norms of musical technique. We might almost have spoken of the grammar of the specific tradition in music - in the present case, the Indian classical tradition with its two modern subtraditions: Hindustani and Karnatak. We might, - but perhaps we shouldn't - because the analogy with language implied in the word grammar can be as misleading as it can be helpful. Let us take note of the helpful as well as the misleading aspects before we proceed.

The musical culture of a society is part of its aesthetic culutre and thus ultimately of its culture. Culture is simply the totality of customs and all those less well-defined norms with reference to which members of that society (be it savage, barbaric, or civilized) live from day today , adjust to the environment, maintain their dialogue with reality, and pass on the insights from one generation to the next (thus ensuring the continuance of that society). When the body of musical customs and norms in a given society) happens to be at all elaborated and complex, we need to distinguish between more than one

segment - the boundaries of course are not expected to be sharp. Beginning with the two essential roles - the listener of music and the maker of music - we have to recognize at least two such segments - the norms of musical taste and the norms of making music that will satisfy the musical taste. To these essentials we need to add two more. The first of these is musical ideology - the norms governing the cognitive activity of musical judgement as exercised by the artist and the music lover. Finally, we have to look for an answer to a very simple question - who makes what kind of music for whom on what occasions. In other words, we identify the norms that govern the incidence of musical activity and its fit (or the lack of it) with the rest of culture. To illustrate, the norms of musical activity of India elite society clearly separate the roles - the artist and the listerner and further separate accomplished, trained, and untrained artists and listeners. The very paradigm of musical activity is the musical session <u>mehfil</u>, <u>jatsa</u>, <u>kaceri</u> at which a small number of accomplished artists sing and/or play (singing has priority) for a fairly large number of trained listeners - especially for the accomplished among them. One of the artists (rarely two or three) is usually singled out as the lead for the time being, the others either accompanying or waiting for their turn to act as the lead. The separation between the composing artist and the performing artist is there but not so clear as in the Western classical musical

tradition. In Hindustani music, for example, the performing artist may perform a pre-composed piece (the bandish or a gat, for example) or compose as he performs. In either case he elaborates and interprets rather than merely present and execute. The fit with the rest of culture is an uneasy one - for example, Hindus exalt music but until recently looked down upon musicians unless the latter had a feudal or saintly status. Islam has little or no use for music.* To recapitulate, musical culture consists of norms of -------

(1) musical taste
(2) music-making
(3) musical ideology
(4) musical activity.

Not all musical cultures in different societies are equally formalized. Even within the same musical culture not all its segments are equally formalized. For example, the verbal activity of passing critical judgements about specific compositions and performances and discussing the grounds for such judgements - that is, musical criticism as opposed to musical theory - is much more prominent and formalized in the West than in India which cannot boast of a tradition of institutionalized musical criticism. Again, we find the same sort of variability if we compare musical culture with other segments of aesthetic culture. Thus, music-making tends to be far more formalized than film-making, picture-

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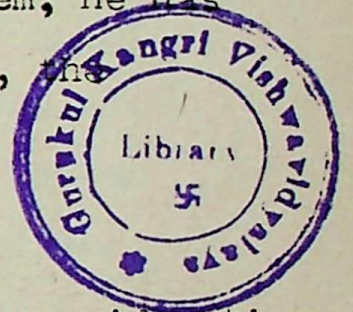
* Sufi tradition is an exception. ________ B. C. D.

making ,or even poem-making. It is this insistent formalization of musical technique to which we here give the name the sastra of sangita -- as distinct from musical criticism and musical aesthetics. (Important though sastra is, it cannot take the place of the latter two.) The nearest analogue that one can think of is metrics or prosody — the body of norms that define what an acceptable piece of verse is like. Typically, the norms do not prescribe what word goes after what, but rather prescribe general constraints in conformity to which the poet makes acceptable verse and achieves something like verse style.

If grammar is conceived as a set of combinatory constraints that govern the construction of acceptable sequences (read: linguistic texts, verse pieces, musical texts) out of a relatively much more restricted stock of recurring constituents (read: linguistic forms, syllable types, musical beats or notes and phrases) then it is a helpful analogy. But then if this leads us to expect a dictionary counterpart - the set of recurring constituents along with the paired interpretations, then, while this works with linguistic forms, it doesn't really help with metrical phrases and musical phrases. It is just not possible to think of set pairings between musical phrases (say, drum phrases or sequences of notes) and interpretations (say, mood types such as elation or sadness or sound-pictures such as a storm or a gallop). Even when some such interpretation can be assigned to the whole musical

piece, it can hardly be figured out as the sum or product of the respective interpretations of the musical phrases.

Before we take leave of the analogy between music and language, we have to note that an aesthetically valid musical piece may include some 'ungrammatical' or deviant sequences as well as the more common grammatical ones. Indeed the sastra itself, up to a point leaves room for deviations. A deviation, in other words, is sometimes a conventional deviation. But there may be unconventional or innovative deviations too - when the artist gets away with them, he has probability modified the sensibility and, possibly, the subsequent course of the sastra as well.

II

Indian thinking about music does go beyond a consideration of (1) the problem of formulating the sastra and the related problem of reformulating it in the light of changing practice. The two auditional problems it has gone into are the following: (2) whether a 'modern' restatement of rasa in music is possible; (3) how one can rationalize the relationship between 'classical' music, 'folk' music and 'popular' music.

To take up problem (2) first, though a simple one-to-one correspondence between musical phrases and pieces on the one hand and musical moods and representations cannot be established. obviously there is some relationship. Which are the two

things, in the first place, between which any such relationship has to be discovered ? On the musical side, is it a note, a sequence of notes, a whole musical piece, or (as is commonly thought) a raga ? And what about a tala ? Can we not associate moods (say, a martial mood) or representations (say, heartbeat) with a tala ? Does the musical term (whichever/it is)express the mood or induce it in the listener ? What is the relationship between the dominant rasa of a piece and the passing moods in the course of its performance ? Is it relavant to ask-- whose mood ? If the rasa theory is to be extended from poetry, to music -- as the ancients obviously intended to but probably never quite got around to doing it - can we do so wholecloth or with drastic modifications ? What are the sangita analogues to the dramatis personae ? The nayaka and nayika, for example, in relation to the srngara rasa? The answer is obvious enough in representational dance (or, more precisely, in the abhinaya component of nartana, the sex of the dancer being irrelavant), but not at all obvious with non-representational dance (or, more precisely, the nrtta component of nartana, which may combine with abhinaya in a given piece).* Neither is it obvious with vadana (playing instrument) and non-verbal gayana (like tarana or the sargam). Even with verbal gayana (like thumri, khayal, dhrupad) the answer is not all that obvious. The there is the traditional association between ragas that emphasize the upper half of the octave

* Cf. B.C. Deva, Raga and Rasa, in Psychoacoustics of Music and Speech, 1967.

with certain hours of the day. abd between ragas that emphasize the lower of the octave with certain hours of the day. Finally, what is the role of the *samajika* (member of the audience) in the *rasa* process ? A related problem is the relation between *ragas* and sound-pictures (the *raga* *Malhar* and rain, for instance).

Turning to problem (3) now, Indian thinking is not altogether oblivious to the social and cultural setting of the musical activity. The traditional classification of *ragas* in to *desi* (folk, literally, regional) and *margi* (great tradition, literally, from the highway) indicates awareness that not all *ragas* got described in the classical treatises. But this awareness was heightened, once the educated elite brought itself to take serious note, sub specie romantic and patriotic, of the 'folk' heritage in the arts and also faced uneasily the yawning gap between 'mass' aesthetic culture emanating from the modern urban setting and its own aesthetic preferences -- indeed the gap in also to be seen between its own weekday aesthetics and Sunday aesthetics. How to find a place in the musical sun for *lavani* music, Balgandharva, and Lata Mangeshkar ? How to make sense of the span of classical music itself from the more accessible (*sugama*) to the less accessible. Consider the relative accessibility of pairs such as the following -- *dhrupad*/*Khayal*, *Khayal*/*thumari*, difficult *ragas*/common *ragas*, *vilambit*/*drut* pieces, vocal/instrumental, *alap*/*chiz* (or *alap*/

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* Cf. B.C. Deva, Ragas and their Time, op. cit.

gat), manipulating sthar frets/plucking the strings jhala fashion, tabla as lead/tabla as accompaniment, tonal percussions/atonal percussions, and so on. (The first member in each pair it usually deemed to be relatively more of an acquired taste. Empirical testing is called for.)

In grappling with all these sets of problems - sastra, rasa, and musical culture -- the Indian thinker naturally sought the help of modern science -- not only physics but also psychology. The possibility of showing that modern experimental evidence bears out what our ancient wisdom intuitively grasped was certainly an attractive one. Unfortunately it wasn't realized and even now is realized imperfectly that a sound conceptual analysis has to precede, accompany, and follow a sound experimental study. (A sound body needs a sound mind !) And a sound conceptual analysis will naturally flourish only if there is a body of sustained musical criticism to analyse. If this lack of musical criticism is to be made good and if the ground for a sophisticated psychological study of music is to be prepared, we must leave behind our naive folk-musicology -- our horizon has to be widened beyond the three problems we have attended to so far. Indeed we should stop being students of Indian music and become Indian students of music. Our musical appreciation must graduate into musical criticism; our musical chronicles must graduate into critical history.

In this wider canvas, four areas can be distinguished for convenience' sake (obviously they are closely releated to each other) --

(1) Understanding the musical artist and his activity _ whether composing or performing, whether untrained, trained or accomplished, whether facing an audience or with the faceless audience in a recording or broadcasting studio or making music for his own benefit, whether acting in a formal setting (mehfil, riyaz for example) or informally.

(2) Understanding the listener and his activity -- whether untrained, trained or accomplished, whether facing the artist or overhearing him or listening to recorded or broadcast music -- and his contribution. (The rasa problem is only one of the problems falling here. The listener's response may be concurrent with the performance or recollective; the concurrent response may be a passing phase or stable effect.)

(3) Understandding the formation and reformation of musical sensibility and a musical tradition which together make the artist's and the listener's activity possible. (The classical-popular-folk problem is only one of the problems falling here.)

(4) Last and also first, understanding the musical work in all its aspects. (The sastra is concerned with only of the dimensions of a musical work. The relation of music

to its paramusical accompaniments, such as the performar's posture, gesture, and facial expression especially in adakari, is a case in point. Another is the use of music in the theatre, dance, film, and song.)

An attack on all these fronts is called for if we are to be saved from merely tinkering with problems and selecting some problems just because they happen to be the familiar ones.

III

Now in what way can the psychologist contribute to an understanding of music under each of these four headings ? Not all these problems will equally lend themselves to experimental analysis - at least not in the initial stages of investigation. The psychologist will probably have to begin with limited, rather elementary problems subject to direct confirmation and not take up the larger issues till such time when musical criticism and and aesthetics develop and succeed in posing the problems in rigorous and specific terms. Broadly speaking, problems connected with musical technique and the sastra categories of technique will be the most amenable to experimental probing, while problems connected with the social psychology of musical taste, ideology, and activity will yield to questionnaire and interview methods. Problems connected with musical creativity and with the changes in musical taste are likely to prove the most recalcitrant. While work done in the West on Western music will certainly be of help here, we must beware of forcing

the phenomena into categories established in a different tradition. After these preliminary observations, we can take up musical creativity, musical receptivity, musical sensibility and tradition, and musical structure and pattern in order and suggest problems for psychologists to take up.

Musical creativity: We have already alluded to the complex relationship between composing and performing in Hindustani music. This can be compared with the corresponding relationship in Karnatak music, Western Classical music, and Jazz music. The resembleness and the profound differences - especially between Hindustani and Jazz music - will bear investigation.

Musical receptivity : Apart from the _rasa_ problem and the related time-of-the-day problem, one can look at the judgements of aesthetic quality such as sublime, sombre, rugged, vivacious, soothing, pretty, beautiful, and the like. These can be correlated with observable qualities of the music and a factor analysis attempted on the lines of psychologist Charless E. Osgood and his associates. The aesthetic judgements, of course, will be couched in the Indian idiom(_thumri_ _thumakti_ _hai;_ _mulayam_ _avazi_). (Cf.Kelkar 1969:219-20, which proposes a general hypothesis that the 'factors' underlying aesthetic qualities are perceptions of unity/disunity, infinitude/finitude, plenitude/sparseness, and perfection/imperfection.)*

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* See also _Research Report_ II of the Sangeet Natak Akademi,New Delhi, abstract included in this volume.

As this point, one may refer to two problems that relate equally well to creativity and receptivity -- namely, those of capacity and of stylistic preference. Let us take up musical capacity first. Is 'having an ear for music' quite different from 'having an ear for Hindustani/Karnatak music'? Listeners from the border areas (like Karnatak) exposed to both, those from focal areas (Varanasi, Tanjavur for example) exposed to one alone, and those from other areas (like the Eastern border) exposed to neither could be differentially tested. What is the role of genetic and cultural inheritance and of physical and human environment ? Can musical capacity fluctuate depending on maturation and old age, physical and mental health, motivation ? What is loss and regain of 'form' in an artist,? It is significant that while one speaks of musical families, one does not speak of poetic families. Is there a specific inherited capacity or incapacity (hostility and unresponsiveness) ? Or are there a group of related capacities or incapacities ? And how are these related to general capacities such as intelligence ? Is there a 'need' for music ? What about the sensitivity to man-made music and animal song on the part of animals, plants, and inanimates ?

How does one correlate stylistic preferences on the part of artists and listeners with their personalities ? Unfornunately, where is the critical analysis and comparison of musical styles that could serve as a point of departure

for such an analysis? To be sure, each localized ghar̲a̲n̲a̲, baz, or vani has been duly chronicled. But there is no aesthetic theory proposing a set of musical parameters for characterizing these styles. Still less do we possess a critical account of personal styles that distinguish a Kumar Gandharva from a Bhimsen Joshi. Do women vocalists share something more than female voices? And is there any musical substance in the popular observation that there is something that is common and peculiar to Muslim vocalists of either sex?

Musical sensibility and tradition: What is involved in 'learning' to listen to and make music? How is musical education related to general education in the case of the artist and of the listener? What factors control musical loyalty? Social provenance? State of mental and physical health? Cultural exposure? Prestige? The social psychology of leadership, stereotyping, prejudice, and the like as these relate to music needs to be looked into.

Musical structure and pattern: What are the localized properties (say, high pitch) and contextual properties (say, dip in the pitch) of the musical sequence that correlate with the perception of a sruti, a raga, the khali, the sam, and the like? Which of these are distinctive properties and which dependent on the distinctive properties and which do not dependent on the distinctive properties? Thus, practical experience in making music and listening to it tells us that practitioners

persistently associate certain differences in the 'same' note in the aroha and avaroha scales of various ragas, textbooks notwithstanding. Again, textbooks notwithstanding, a raga is identified by the singer and the listener not so much by identifying the vadi and other recognized diacritics (laksanas) as by identifying the musical phrase or phrases (pakad) characteristic of a raga. How so ? Just what are the distinctive feature of khandas or khanas opening with an aghata or tala as against a kala or khalai ? And those of khandas that open with the sam in a tala cycle as against those that don't ? The whole notion of jagah (felicitious locus) and that of ornamentation (gamaka) need to be looked into since they remain unformalized in the sastra. Indeed, in the long run, the psychologist will have to understand the role of conscious artistry in musical form and the mutual influence of sastra and musical practice. The simpler scales, melodies, and rhythms of folk and popular music should certainly be studied as well - apart from their intrinsic interest they may provide valuable clues to their more elaborated counterparts in classical music.

In the above discussion, we have mentioned observable properties of musical sequences. These refer to the production (whether vocal or instrumental), the transmission, and the auditory judgement as made available through a verbal response. Thus, one can offer and test physiological and acoustic

definitions of voice qualities such as dhala, buland, lacila. (Cf. Kelkar 1974:274, 225 which among other things proposes a hypothesis that voice quality proper can be identified with two parameters - acute/ grave (enery concentration in higher/ lower overtones) and lightly/highly damped.) One can also compare the perception of 'syllables' in vocal music and wind instruments and 'strokes' in strings and percussions; and then go on to assess their contribution to the total aesthetic effect. The aesthetic effect of a well-executed parhant of table or pakhavaj bols or dance steps is comparable to that of playing the drum itself and of the auditory effect of the Kathak dancer's footwork. This comparison should provide us with a good point of entry into the complex and rich system of rhythm in Indian classical music. (Cf. Kelkar 1974:225. One may begin by testing this analysis of some table bols and the corresponding strokes:

dhit with check, without as

dhin with check, with as

dha without check, with as

A similar analysis can be made of the tarana syllables. Finally, the following scheme should be helpful in comparing the resources at the disposal of different systems of music:

(1) tone and quality

(1. 1) tone and a scale
(1. 1. 1) successivity relations
(1. 1. 2) simultaneity relations

(1.2) quality
  (1.2.1) source quality (vocal/instrumental)
  (1.2.2) manipulatory quality (articulatory/fingering)

(2) catenation
  (2.1) volume control
  (2.2) rhythm
    (2.2.1) free
    (2.2.2) defined by bars (<u>khandas</u>)
    (2.2.3) defined by bars and cycles (<u>khandas</u> and <u>avartana-s</u>)

  (2.3) segmentation
    (2.3.1) texture as defined by syllables/strokes
    (2.3.2) structure
      (2.3.2.1) pauses and breaks
      (2.3.2.2.) structure of a piece as governed by a genre
      (2.3.2.3) structure of a musical session

Some of these are obviously exploited more fully in Hindustani music (for example 1.1.1) while others hardly at all (for example 2.1).

It is high time that the study of Indian music is rescued from anecdotage and antiquarianism, amateurship and impressionism, so that it can match up to its worthy subject.

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AFFECTIVE ANALYSIS OF NORTH INDIAN RAGA'S

A METHODOLOGICAL INQUIRY.

ASHOK RANADE

Experimental Psychology and such other disciplines are today paying greater attention to arts in general. Various art-forms and modes of artistic expression are being examined and analyzed objectively. This has considerably reduced unnecessarily and disproportionately mystified areas of thought. In a small measure Musicologists in India are pursuing the same methods with reference to problems like meaning of Music, (Deva and Nair, Sangeet Natak, 10, .54 'Form in Music') Rightly, these attempts have not been claimed to be exhaustive, and no conclusions are put forward as final. I however feel that the crucial cuestion of methodology is to be discussed afresh before such attempts are made on a larger scale. There are some important considerations which necessitate the present advocacy for a methodological review.

Firstly, experimental psychology, when confronted with valuational aspects, starts with a handicap if its valuational assumptions are not relevant enough. Affective analysis of any artistic activity starts by assuming that certain enquiry objects are artistic. This basic assumption naturally sets the tone of the whole process. It is in this regard that North Indian (hence forth referred to as Hindustani)

ragas are to be comprehended with the utmost possible conceptual precision before they are subjected to any investigation. A proper conceptual decision prior to the use of methods of experimental psychology is a precondition that must be fulfilled.

Secondly, in itself 'Music' is too broad a category to justify undifferentiated application of similar methods irrespective of the nature of music involved. No doubt music is Universal in certain aspects. But it is so only at a highly abstract level. The level is too abstract to warrent application of the same objective methods of experimental psychology in every case. Unless qualified by ethnomusicological particularity, Universality of the method is too broad and hence deceptive. Hence, the methods used by Western Musicologists will have only a limited universal validity. This is so because experimental psychology as applied to arts involves, as said earlier, an initial conceptual decision regarding the valuational aspect of the phenomenon.

In the light of these general remarks let us examine the problem referred to in the title of the paper.

Affective analysis is analysis of the behaviourial pattern of an organism that emerges after experiencing impact from an external stimuli. The analysis can of course be of the physiological as well as the psychological aspect. Obviously, the external stimulus is viewed here as a constant and is assumed to remain unaffected by the receptor organism -

or more precisely by the process of originating the stimuli. Affective analysis of both physicological and the psychological types is thus an analysis of one end of a bipolar process. As opposed to this, we have what is called an effective analysis. It includes analysis of both the originator and receptor of the stimuli.

Now the question is whether it is valid to consider Hindustani raga a result of an unidirectional process ? Does not the audience response account for a significant qualitative difference in the emergence of a raga ? Western music does acknowledge the effective existence and aesthetic role of a music score. The fact that a score exists results in a possibility of having total music available even <u>before</u> a performance. Hence there is more of execution than interpretation and more of presentation than elaboration in it as compared to a Hindustani <u>raga</u>. This means that methods used for music that is mainly written and music that essentially belongs to oral tradition cannot be the same. Improvisation is one consequence of the audience response. It results in a Performance, that is dynamic and unpredictable. The dynamism is a condition that accompanies the realization of Hindustani <u>raga</u> in all its stages or phases. A play-back of a recording is really a use or origination of a stimuli which is only half-way to performance. It is a recital and to that extent is too limited or narrow a version of a Hindustani <u>raga</u>. Experimental psychology uses here a

seed-form instead of a form. The precondition regarding a conceptual decision of evaluative nature that lies at the basis of our enquiry is not met with. Music belonging to a tradition where score reflects the entire or a very large portion of music may follow the method of 'play-back' without harm because there the qualitative gap between play-back and performance is practically negligible. On the other hand, music having an oral tradition loses qualitatively in a play-back as it becomes a recital and not a performance. Raga in a recital is different from raga in a performance because in the latter, valuational features of improvisation and audience - response are present. Affective analysis of a Hindustani raga thus suffers from a defective investigational start. The essential dynamism and unpredictability of a Hindustani raga makes it necessary to reconsider the Western procedure used to analyze both types of affective responses.

Another comparatively minor point is regarding the basic Musical Unit to be used in effective analysis of Hindustani raga. It is quite possible that a drut Cheej in a particular raga may seem to be an ideal unit. It is definite, short and due to the comprehensibility of the word-content, ideally amenable to methods like that a Hefner's adjective circles. But here again is a weakness in the conceptual decision. A Cheej can at the best contain seeds of a raga. The essential, final or total form of a Hindustani raga erges

in its elaboration. A cheej has structural seeds, the skeleton of the possible total form, but nothing more. It is better than a mere presentation of aroha-avaroha but still it can hardly be accepted as a full pircture of the raga as such. This will be less so in ragas which are aprachalita or anavat (i.e. rare), which for all practical purpose do not have much scope for imaginative elaboration. In case of these ragas even one cheej may reflect the total picture of a raga to a very great extent. These ragas are structurally so rigid that the channels of elaboration are fixed and limited. These are most 'predictable' ragas.

This leads us to an important consideration of the validity of treating all ragas as subjects of an affective analysis. It can presumably be accepted that individual musical notes by themselves do not affect. It is because they gain contextuality that they appear to cause changes of both physiological and psychological nature. (Rasa-theory can enter into picture only through the accompaniment of word-content.) But the problem is: Can we maintain with equal force that Darbari and Nat-Bilawal affect us ? The threefold musicological classification of Bhatkhande (based on ragas taking shuddha Re, Dha; komal ga, ni; and komal re, dha; respectively) is structural. As far as the affective aspect is concerned Yaman and Gaudsarang, or Yaman and Chayanat can hardly be treated as similar. Same point

can be made about ragas in other thats too. What is necessary

is a raga-classification put forward with an affective bias. It seems that in this context the raga-oriented classification may be used with a qualification. What are known as jod-ragas should be left aside. Varieties of Kanada, Malhar, Sarang, Shri, Bilawal may thus be omitted and primarily mood-oriented ragas like Jogiya, Darbari, Bhairavi be taken up for investigation. I am aware that this sounds speculative but at the present moment it is better to be speculative than being categorical in an easy manner. Jodragas are intellectually conceived. They are more concerned with structural manipulations than building up of a mood. That this is so is reflected in the ordinary responses reflected in the critical or appreciative terminology used by musicians and music critics.

We can also take a cue from the folk-melodies like Pilu, Pahadi, Mand, Gara-melodies that are called dhun - ragas. These ragas have definite identifying phrases but otherwise they have a loose structure. It is curious that only certain Raga-like structures are discernible in folk-music. Pending greater field-work and more rigourous analysis it is to be kept in mind that as mood-music relationship is likely to be be an ethnomusicological and ethnopsychological phenomenon, Dhun-ragas will be a good starting point for affective analysis than the deliberately structured Jod-ragas, or others that are not primarily mood-oriented.

Adjective-scale methods or adjective-circle methods vis-a-vis Hindustani ragas pose one more problem. The

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methods are developed in a system that has recognized and given a considerable weightage to 'programme music'. Music with clear-cut descriptive purpose therefore must play a great role in channellizing responses. This will be consequently reflected in the methodology of affective analysis. Hindustani Ragas follow a different method of construction, presentation and realization of the ultimate expression. Except for the seasonal Ragas like Malhar, Basant there is no possibility of having a descriptive content associated with the core of a Raga. As said earlier, it is the descriptive aspect that distinguishes programme music from music that is configurational. It seems therefore imperative to evolve new methods of analysis or modify the existing ones if they are to be used with benefit in the context of Hindustani Raga.

In another context I have concluded that music has only two moods- - a mood of elation and dejection; (Neitzsche's Apollonian and Dionysian bi-polarity will come to mind easily.)

Responses to music can be grouped under these two categories and thus far a universal or a generalized statement is possible. Further variations in individual responses are of course possible but they will have to depend on the individual associations. Adjective-scale of Adjective-circle methods will have to consider this possibility too. A theoretical position or a conclusive statement that avers a universal, intrinsic relationship of correspondence between music and mood is possible only up to certain point. Beyond

that the individual associations sub-group themselves in various ways and defy a general statement. The question involved is not that a having a more detailed or exhaustive list of response-indicating adjectives. The question is of recognizing the existence of limited validity of the Universal element in Music and correspondingly to evolve a more comprehensive and inevitably intricate methodological complex.

Does the melodic realization of Hindustani Raga warrant a difference in the method to be affectively analyzed ? Perhaps so. Becuase harmonization or melodic progression are the causes of differing musical features. Harmonization means: Simultaneous use of various instruments : therefore greater variety of operative tonal and instrumental symbolism: therefore greater possibility of associational aroused of allusive emotions This harmonized music may be the cause of a more fruitful use of adjective-scale and other analogous methods. On the other hand, melodic progression seems to be more intense but less varied as far as its allusive potentiality is concerned. This too may be the reason why a different approach will be necessary for the proposed affective analysis of Hindustani Ragas.

The position taken above may be summerized as follows :-

(1) Any investigatory activity in experimental Psychology starts with a conceptual decision taken about valuational aspect.

(2) Affective analysis concentrates only on one pole of

a two way process of music realization. Therefore it presumably starts with an investigatory handicap. Effective analysis is a way out.

(3) Hindustani _raga_ is realized in a performance and not in a recital. It is a dynamic, improvised, unpredictable entity and as such cannot be subjected to methods applied to music having different characteristics.

(4) Methods of affective analysis used with reference to Western music seem to have doubtful utility in case of Hindustani raga because (unlike Western music) it does not possess the characteristics of having descriptive content, instrumental symbolism, and written versions.

(5) Essentially, mood-music problem is the core of affective analysis. Mood-Music relationship being ethnocentric rather than Universal and bi-levelled rather than mono-levelled. The adjective-scale and analogous methods have to be suitably modified. Alternatively new methods have to be evolved after taking into consideration the nature of music involved in the inquiry undertaken.

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CONCEPTUAL FRAMEWORK FOR ANALYSIS OF AESTHETIC BEHAVIOUR.

SHYAMALA VANARASE

In considering the problems in various areas of psychology of music, it is evident that the perspective we choose is linked with our position with respect to wider issues of artistic and aesthetic behaviour. The framework suggested here is an attempt to take an integrated view on aesthetic experience and behaviour. This can be applied to the focal problems of psychology of music.

History of experimental aesthetics extends over a century. There is, however, a lack of a stable theoretical framework in which the behavioural issues can be adequately stated and investigated. G.T.Fechner, the founder of the discipline, introduced the idea of emirical investigation. He contributed significantly to the methodology of such investigations. His line of thinking led to the studies of preferences, rankings and of relations between taste and personality. Psychoanalysis and Gestalt Psychology contributed to the studies in dynamics of artistic behaviour, structural aspects of artistic stimuli and characterisation of beauty. These schools had theretical systems which had to be accepted and artistic behaviour was regarded as an instance for establishing them. Art critics and aestheticians, having a different goals for their respective analyses, offer explanations which draw on experience on a personal level, but they do not aim at offering a guideline for research. Empirical investigations, when they have come from the camp of psychologists have been very specific and limited.

They seemed to leave an appreciable gap between the issue and the data. The nature of the questions asked and the methods used was such that the discussion had to be limited to comparitive judgements as the focal aspect of aesthetic behaviour. In the field of experimental psychology, theoretical advances in other more clearly defined areas were opening newer, more fruitful lines of research. Clear definitions, experimental control, universal verification, and the objective outlook of the behaviouristic school seldom, if ever, left room for this area. The 'high subjectivity' areas enjoyed very low popularity, as it was difficult to establish universal results.

Such experimentation as was coming, was not respected in the field of art, the critics and aestheticians dismissed it as superficial and shallow. Psychoanalytic view, on the other hand, found many sympathetic listeners amongst them. This theory almost restated the task of the critic in terms of search for symbolic manifest material as a window onto the latent unconscious material.

This rift between the two fields, viz. art and psychology, can be easily seen through the question asked by them and the methods accepted by them. When a psychologist looks at these 'high subjectivity' phenomena he shows interest in quantified information in terms of S, O, R (Subject, Object, Response) check variables. Such aspects of stimuli and responses as are easily measured are picked up more readily. Systematic variation in elementary properties of the stimulus material, corresponding

changes in the measurable aspects of indicator responses, are, for the psychologist, initial items of scientific inquiry.

The art critic and the aesthetician on the other hand, take up the inner aspects of experience, total impact of the whole work and highly individualistic details of style and appreciative response.

This almost looks like a tug-of-war. Today, however, the situation is not all that tense. Both the fields are seeking points of concurrence. In the camp of psychologists there is an increasing awareness of the need to investigate the individualities of men, to develop complex techniques of experimentation & statistical analysis, and to take up 'human issues' as worthwhile business of objective psychology. Reciprocally, the experimental method has found its supporters in the camp of art critics and aestheticians. The time is, therefore, ripe for the development of a perspective which will be meaningful to both the disciplines.

For undertaking consistent behavioural analysis, one has to consider some issues and, if possible, take a position regarding them; without such a consideration, clear investigation and interpretation is not possible. The major issues in this field are: 1. The nature of aesthetic behaviour,

2. The form of aesthetic behaviour,

3. The nature of aesthetic response,

4. The nature of aesthetic stimulus,

5. The artist as a person.

1. Aesthetic behaviour can be treated either as an extension of everyday behaviour or as a special category of behaviour. The level of complexity of aesthetic behaviour and the wide range over which it is found to vary, make us wary of extending the principles offered by laboratory work straight into this realm. Absence of a utilitarian goal, and of survival orientation have generated a resistance to the former and a general acceptance of the latter. This is further reinforced by accounts of artists and the reports of artistic experince from lovers of art. Faced with this, the scientific tools of analysis seem to become inapplicable. The mystic element in man or the divine spark in the artist are not useful descriptive terms. They have low verifiability and low hypothesis generating capacity. One often comes across some investigations which collect data in the usual form, but go on to interprete it in such terms, This is decidedly a pitfall in scientific progress, because it is a mixture of incongruous elements, the technique and the concepts do not belong to the same sphere of thought. This also has an additional danger of generating wrong beliefs about what is 'scientifically' proven. When we accept the other alternative, viz. that aesthetic behaviour is an extension of everyday behaviour, the charge of 'reductionism' is ready for us, demanding adequate accommodation for all the complexities and niceties of art. It no doubt looks as if experimental psychology is

likely to fall miserably short of satisfying this demand. But if we adopt this line in our thinking, we have a fund of past experimental work and theoretical models after which new investigations could be planned. With the present development of refined techniques of experimentation and data processing, it is possible to use the experimental method at complex levels. In the classical experiment, a rigorous, controlled and an artificial atmosphere prevails. This shortcoming (X in this particular case,) can be avoided without losing the advantage of objectivity. On these counts it seems that treating aesthetic behaviour as an extension of everyday behaviour is a better alternative of the two.

This, however, does not mean that nothing needs to be done anew. Simple extensions are bound to fail. In bringing about a meaningful psychology of aesthetic behaviour, it is necessary to grasp the peculiarities of this sort of behaviour. There are some points which it shares with other forms of behaviour. These refer to the artistic activity. Aesthetic responses to non-art objects have to be differentiated from it. In artistic activity, influence of sociocultural background, training, interest, and such other factors can be shown to operate in a particular way. The common ground offers a good starting point. In aesthetic response, individuals receive or even seek non-useful, formal aspects of stimuli, and search or arrive at some concept of consistency, governed by the

structure itself which there may be an attempt to grasp the symbolic meaning, there may or may not be verbalised expression, and feeling aspect of the experience would predominate in the expressive part, whether verbal or non-verbal. From the field of artistic endeavour, we have a clear attempt at composition, form and structure. It is also interesting to note that the artistic activity is, at times, far from the calculated, deliberate character of intellectual design. Ease and naturalness are valued. Yet, in their respective fields, artists may have a tradition from which they draw their technique; or it may seem to hamper them and they may take a sharp departure from it. In any case, in art behaviour, the stimuli are experienced and responded to with a different set of assumptions. These assumptions decide the relevant aspects of stimuli as well as of responses.

With these characteristics in view, we can go on to inquire about a workable perspective. This we find in the recent studies of exploratroy behaviour. It is observed in men and animals, in laboratories and outside. Curiosity and play are typical examples of the directions taken by this form of behaviour. This behaviour...'seeks exposure to any event, regardless of content, that will offer a rewarding or pleasurable level of stimulation, variability, information inflow.' (<u>Experimental Aesthetics</u>, D.E. Berlyne, in <u>New Horizons in Psychology</u> 2, Pp120.) These behaviours, which are non-instrumental, offer possibilities of breaking monotony,

of getting relaxation, of additon of feeling to instrumental acts, and for imaginative recontruction of materials. This last aspect is characterised by freedom from necessity of being in tune with the real world. As a result, we have a wide range of such behaviours in the forms of random activity, decoration, ornamentation, games, applied arts, search for styles, and media. At the human level, these are firmly rooted in the sociocultural contexts in which they appear.

In the light of this, we can consider other issues mentioned earlier.

1. The form of aesthetic behaviour.: In the history of this subject, several alternative answers are provided. In G.T.Fechner's work, comparitive judgement of pleasingness, rank ordering according to preference and a common denominator of aesthetic stimuli were investigated. this view has dominated the scence ever since. It is characterised by an emphasis on intellectual functions. In the Gestalt school, we have an attempt at extending principles of perception to aesthetic phenomena. Here, perception of configuration as expounded by this school includes such facets as regularity, symmetry, simplicity, etc. In such a concept, we can see that art cannot be adequately covered. The notions of brain processes have not been substantiated by later research. In psychoanalysis, we have a position whereby art is regarded as an extension of defense mechanisms, disguised wishfulfilments, and fantasy.

The dynamics of art is not in any way different from that of anxiety of of other forms of neurotic behaviour. This view has nothing to say about the tangible manifest characteristics of the aesthetic stimulus. Aesthetic attitude and aesthetic emotion have a ling historyin aesthetics. It is only recently that we find an emphasis on exploratory behaviour and on collative stimulus properties.

All answers mentioned above seem like parts of jigsaw puzzle. If we consider the development of aesthetic behaviour in all of its aspects, we find that it has several components common with everyday behaviour, with additional properties of its own. Orientation of response towards feeling and operation of perceptual processes within a system of special aesthetic e expectancies are two important characteristics of aesthetic behaviour, regardless of particular processes going on at any given moment. It is obvious that art forms and media of artistic express would determine the actual psychological processes occurring at the time of the encounter.

3. The nature of aesthetic response: Creation of a work of art or appreciation of experience from aesthetic angle are two divisions of the aesthetic response. Ordinarily, creative activity is not looked upon as a response activity but as a complex form of behaviour. It has to be included in this, because producing a work of art in whatever medium and in whichever style, is a response of the artist. This response, like many other social responses, becomes a powerful stimulus,

it is complexly determined, but it is different in many respects. It is not restricted to realistic stimulus factors inevitably. The context may refer to a world of fantasy and several aspects of the cultural past, and converntions governing that particular art. There is considerable flexibility in the manner of composition of the response. In a more detailed discussion we will have to go into the internal differences between the responses in performing arts and other arts, between literature and other arts, and between professional and non-perfessional endeavours.

In appreciative responses, aesthetic adaptation and its level bevqome important. There is a clear orientation towards feeling, and action is either inhibited or is geared to expression in conventional forms. The demands made upon previous learning depend upon the state of deveflopment of that particular art in that particular culture. There is some hesitation here, as universality of appeal of art has been stressed all along. This point needs a more detailed empirical analysis.

4. The nature of aesthetic atimules: The properties which evoke the aesthetic response have been debated or enumerated in treatises on art. Attempts at characterisation of beauty are also famous. There is an ancient quarrel over existence of beauty in the subject or object. This issue is difficult to tackle because the usual search for physical correlates

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of experience becomes inadequate here, as the response is not dependent upon the physical properties per se, but upon some relationships between them..The relevant relationships are again decided by aesthetic context, and to some extent by previous experience of the subject. So we can not just study the properties 'out there' and call them aesthetic stimuli. This is further emphasized by the extent of individual differences in aesthetic responses. Dependence of aesthetic response on O factors is so obvious and compelling that definition of the assthetic stimulus in unidimensional terms has to be rules out.

The recent work on collative stimulus properties is a significant advance in the direction of meaningful analysis of aesthetic behaviour. Factors like complexity, ambiguity, novelty and surprisingness, while presenting possibilities of measurement, ring a note of 'subject-rela--tedness.

5. The artist as a person: Artists have faced both extremes of regard and treatment. There have proposals to banish them and there have been lofity claims for art as a way to self realization. On the one hand, they have had royal patronage, and a low position in the status system of many societies, on the other. Art and abnormality, art and whim, art and addiction have been coupled in popular stereotypes. At the same time, art and vision, are and depth of understanding of life, art and human significance

are put together. An important area of investigation in the field of personality has been devoted to 'artist personality'. It has been found that the personality profiles of artists and scientists are similar. +Attempts to find out differences between artists and non-artists have focussed their attention on personality variables as well as on other psychological functions of a more specific nature. An area which has not been probed by psychologists needs mention here, as it seems to be significant in our understanding of aesthetic behaviour. Choice of a medium and interactional peculiarities with it have not been studied yet. Artists functioning as artists operate in a different set of givens, and, perhaps, are controlled by experiences and mechanisms of their own.

On this background, we can map the details of the conceptual frame now. In the standard form of psychological analysis, we can put aesthetic behaviour. 'Response is a function of the stimulus variables and organismic variables operating in a context'. In the area of aesthetic behaviour, we can use the following sketch:-

I) Context: i) Physical Characteristics,

ii) Sociocultural Characteristics,

iii) Aesthetic Characteristics.

II) Stimulus: i) Physical Properties,

ii) Second Order Properties: a) Relational Properties

b) Stylistic Properties.

111) Organism: i) Capacity: a) Artistic Talent,
b) Appreciative Skills.
ii) Training: a) Technical Training
b) Social Learning
iii) Personality Structure.

Vl) Response: a) Inappropriate Responses
b) Appropriate Responses: 1. Verbal Responses (Report, criticism, exclamations&c)
2. Non-verbal Responses
(Changes in arousal)
(Cognitive Changes)
(Changes in feeling quality)

This sketch can be easily transposed to the idiom of the art critic.

SAMA

IN
HINDUSTANI RHYTHM:
A PSYCHO - AESTHETIC STUDY

BY
SUSHIL KUMAR SAXENA

(Demonstrations on the tabla by SUDHIR KUMAR SAXENA)

The subject of this paper is, in our view, important, It relates to a feature of Hindustani music which we all seem to know, but the precise place of which in the economy of rhythm we have not really tried to understand.

We may begin by straightway proposing the following definition of Sama:

> Sama is the first or focal matra (or beat) of the rhythm cycle as treated musically, spoken or merely contemplated in idea. In principle, it is to be kept in mind continually as the major accent of an even flow of laya; and is, in fact, often sought designedly to work up effects of occurent design and direction.

Before we begin explaining the main ideas implicit in this definition, some comment may be made on the word 'psycho-aesthetic', to indicate what our approach to the subject is:

There is one particular context in which the psychological and the aesthetic come very close to each other, without, of course, becoming identical. That is the region of perception. Perception is an accepted topic in the study of psychology. But it is important also in relation to the arts. In fact,

1. See in this connection, The Perciption of Rhythm, by B.C. Deva in the Jl. of Mus. Acad, Madras.

if we only leave out literature, the aesthetic may well be said to mean the organized quality of the perceptual elements of art, of course, in so far as this organisation is conducive to a particular kind of delight, disinterested or non-utilitarian.

This perceptual organization may be of colours, shapes and masses in the case of painting: or of tones and beats in the case of music. But what concerns us is the fact that perception is the common ground between the psychological and the aesthetic. What is more, psychology gives us some laws of perception - the Gestalt laws - which are really principles that determine the organisation of the perceptual field. So, if we discuss the subject, śama, from the viewpoint of the question, how it makes our rhythm appear organized - and if we also appeal duly to the Gestalt laws of perception, as we are going to do - our approach will be truly psycho-aesthet

Throughout the paper our main concern is indeed the question: How does the śama help in making our rhythm seem organized to the trained ear? Here, the words of 'seem organized' signify the psycho-aesthetic approach.

Now, as for organization, it appears that it is always done around some central point or region. In our rhythm, the śama is the centre. But, how does anything become or appear central? In two ways we answer: by serving as the source and as the direction of some activity or significance.

...3..

(Thus, in the present situation, we are for some time central - central effectively, not physically - because we are the source of the talk, and also because you, the listeners, make us appear central by looking at us, and by depending on us, at the moment, for some understanding of the subject). Now, the sama too is central is these two ways. First, it is the source of rhythmic design. Secondly, it is that towards which the rhythmic patterns are often seen to move, the point at which they seem to look. This is to think of the sama as the destiny of rhythm. Now, let us explain these major points verbally. (Other points of the paper will be made along with the tabla)[2]:

1. To begin with, the sama is the source of rhythmic design. I emphasize that the sama is not merely the first beat of the cycle, but that it directly fixes, by its own temporal character, the speed at which the following beats are to be played. To illustrate, the time which one takes-more or less-in speaking the very first number of a simple bit of counting, at once determines the speed of all that follows. If we say 'one' - or play the sama - in a leisurely way, the entire process is slowed correspondingly; and if we utter 'one' quickly - or play it sharply on the tabla - what

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2. The 'illustrative' bits of drumming have also been recorded by the Akademi. This explains why, in the present essay, we mention only the opening 'bols' of the rhythmic patterns played, instead of citing them in full. The cycles, however, have been given as they are.

follows is also at once quickened.

In actual music, we all do this. But perhaps we have never attended to this as an object of explicit thought. And yet this is aesthetically important, as follows. Of a good work of art we ofetn say that it is an organic whole. One meaning of this aesthetic concept is that the part actively determines the character of the whole. Now, the example we have just now had is, in our view, a clearer illustration of part-determining the whole than is to be found in the region of any other art.

2. And, now, to the second point: the sama, not as the source, but as the destiny or target of rhythm. Here, the meaning is quite simple. The sama appears 'central' just because many rhythmic patterns seem to look at, and to move towards the sama in a shapely and identifiable way, thereby highlighting the centrality of sama by their very orientation, (even as you make us seem significant, we repeat, by just looking at, and by attending to us). This is indeed quite simple, and may even seem trite to many of us. So, let us temper the commonness of the point by making a remark of some subtlety.

If the drummer, during the process of playing a shapely pattern which seems to move clearly towards the sama, also gradually increases the intensity of the bole-s, the additinal suggestion of an ascent - not of mere reaching, but of ascent-

the appearance of a kind of aroha will be worked up, at once bringing rhythm closer to the organized character of a melody which we know as aroha and avaroha. The fact that melody and rhythm go together is one thing; that they may appear somewhat similarly organized, is quite another.

We may add that, in such cases - that is, where a pattern delights us by aiming at, and by hitting the sama as its target -the principle at work is the Gestalt law of good contour or common destiny. But, the law itself - as explained in books on psychology - says nothing about the increasing intensification of the bole-s which is really the drummer's own independent doing.[3]

We must indeed remember that no amount of analysis, psychological or otherwise, can really seize the creative vitality of an artist. For instance, quite apart from the design of the patterns he may choose to play, a skilled drummer may impart an extra bit of quite unexpected sharpness to the sama by just playing the penultimate bol a little later than its grammatically set moment. Let us illustrate this. Here is a cycle of seven beats :

Tin ta tivra kika / Dhin dhin / Dhas Dhas

If recited in a simple way, there is no tension in the rhythm; and no suggestion of any release of tension

3. Yet, in so far as it heightens the suggestion of org . orientation, such intensification will be quite in accord with the Gestalt law of common destiny. We failed to say this while presenting the paper.

at the Sama. But, now think of a possible change. The last but one 'dha', here, is at the sixth beat. But if we speak it a little after the 6th beat, by elongating the second dhin, the two dha-s will tend to come closer together, after which the Sama at tin will appear a sharper release of tension.[4]

But our precise meaning, here, should be clearly understood. We suggest only that the laws of perception are not quite adequate to art. They do not exhaust the creative possibility of rhythm. But we do not say that the laws in question are not at all relevant to rhythm. Relevant they truly are. Let us illustrate this positive point too. Just think of the principle of contrast - which is the most effective safeguard against fatigue of attention and sickening of interest - and then attend to another cycle of seven beats:

Tins ta Tivakita

Now, the Sama - bole here is tin. It seems one,[5] elongated, steady and closed. The preceding tuft of bols is tirkit. This appears internally diverse, marked by succession, relaxed and lively. Now, the contrast - of the diverse with the one, of the lively with the firm - is aessential to bring

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4. During the 'presentation' of the paper, this point was made in terms of mere recitation or parhant.

5. Though it, in fact, has two aksharas or letters.

out the distinctive effect of the Sama - boletin. This contrast - and with it, the distinctivr effect of Sama - will both disappear if we introduce an element of successiveness in the Sama - bole itself, by turning the steady tin into a quicker two - in - one tin - tin.[6]

It would, however, be wrong to suppose that the actual. hear character of sama depends on its relation to the immediately preceding bole along. In the case of a bigger rhythm, it may in fact be found to depend on the inner organization of the entire cycle. This is specially so if the sama - bole is not exactly repeated anywhere else in the cycle; in which case it appears as a distinctive figure against the whole structure of the thekā - quite in accordance with the Gestalt law of figure and ground.

We may illustrate this. Luckily, the example which we propose to consider has a fuller relevance. It should illustrate not only how the Sama can appear as a clear figure against the ground of the entire cycle = because it is not exactly repeated anywhere else - but also the relevance of the laws of contrast and common destiny to the very creation of rhythm - in this case a cycle of 15 beats. We choose dhin-n-n. - a kind of closed nasal continuity - as the Sama-bole; then provide a contrast to it by putting the quite different syllable tirkit before it. Next, in

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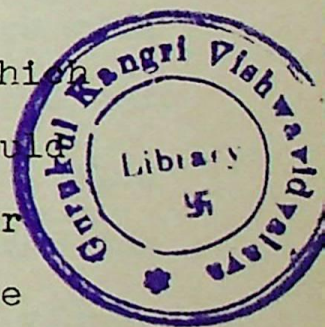
6. Without, of course, exceeding the permitted length of a matra. This point again was orally made. It too has been recorded.

order to provide the needful suggestion of appearing to move towards the _Sāma_, in accordance with the law of _Common destiny_, we put still another _bole_, _ta_, before _tirkit_ itself in such a jumping manner[7] that the whole complex may seem to move clearly towards the _Sama._ The total complex is now as follows :

And, beginning with _dhinn_ as the _Sama-bole_, the resulting cycle runs thus :

But, whether the cycle be big or small, the actual heard character of the _Sama_ is different from the _Sama_ as merely _though of_ as being the centre of the cycle. The phenomenological is one thing; the theoretical, quite another. Also we must remember that the Gestalt laws are no intellectual construction merely imposed upon experience. They stand for ways in which experience itself appears organized. One does not have to be an intellectual to use the Gestalt laws. This partly explains the fact that many beautiful rhythmic compositions have been created by such masters of _tabla_ and _mridanga_ as had no formal education at all.

And with this we may turn to the more interesting part of the presentation, - some illustrative _tabla_-playing. Here, we begin by illustrating the difference between _two possible functions_ pf _Sama_. Imagine the opening of a _sitar_ recital. After the initial _alapa_, when the _gat_ begins, the drummer- the

7. Here, between two beats. If put between two beats, a bole certainly seems livelier than if it just coincides with a beat

accompanist - generally opens not with the simple theka, but with a pattern. Now, the way this pattern is commonly played today presents Sama as a sharp and loud sound which enables us to mark and identify that the focal beat has come; and it also often enables the drummer to get some open applause for himself, which is not exactly the same thing as being helpful to the main performer. Or, alternatively, this opening pattern may be played in such a mellow, steady and shapely way, that the final Sama does not have to be actually indicated, but is just suggested, say, by a nod of the head; and yet the character of the rhythm may be affirmed quite truly, if gently, (The illustration which follows should make it clear to us how the Sama which just announces itself - with a bang, as it were - even to the poorly trained, is entirely differenct from the Sama which induces and enables us to dwell in the region of a particular rhythm. The pattern, here, is the same, but it is to be played in two different ways, - first vigorous, and then gentle:

1a. ILLUSTRATION Beginning as (loud)

1b. ILLUS: The same pattern (soft))

In the second case here, the final Sama is only suggested, not actually played. Of such an ideal affirmation of Sama, we have quite a few other instances in the region of rhythm, - for example, the patterns of anagat variety. But we next want to present something different, - a pattern during

the Sama (of the cycle) occurs repeatedly, but is just left out, not actually played; and yet the gaps of silence seem to be heard. What happens here is - and it is a clear operation of the Gestalt law of good design or common destiny - that the design of the pattern is so coercive and the filling of boles so instense that we are at once enabled to fill in the narrow gaps ourselves:

We must here add that the net appeal of playing despends not only on the character of the pattern itself, but on the skilful accentuation of the boles by the drummer himself. This should become clear presently, as we turn to consider a point of contrast, between the Sama that comes as a mere ending - weak and cheerless - and the Sama that emerges as the climax or destiny of a shapely and powerful movement.

In both cases, the playing will be correct - grammatically. It has got to be so, But, whereas in the first case the playing will be only correct, not effective, - due to lack of proper accents and the Sama will just occur, not impress - in the second case the sama pattern will be played with due inner accentuation, and a controlled and increasing intensification of the boles as they approach the Sama, with the result that the Sama will duly appear as the highest point of the flow.

But the Sama can assume a still different form. It may come neither with the force of a climax, nor as the mere

exhausted ending of week playing, but as the gently satisfying self-completion of a rich, elaborate and wellorganised pattern that unfolds itself steadily and is internally distinguished by such a subtle variation - called a bul or badal - that attention is here held by the whole inner fabric of the movement, and is not dominated by the advent of the Sama. The Sama in this case satisfies like the natural conclusion of a logical movement of thought. It does not dazzle us with the force of a climax. And the delight, is, on the whole, fairly evenly spread out, with the bul or variation as its focus, the variations, here, being of the bole, tak. The final Sama (we repeat) just comes, and is accepted; but it does not domineer:

And no, to something simple - a matter of detail - but something which demands attention. It is common to speak of the Sama as the point from which the rhythmic flow begins, and to which the flow returns. Now, let us attend for a while to this idea of coming back to the Sama. Who comes back to the Sama, we, who do the counting, or the flow of rhythm itself? We may here recall that some keen lovers of music ask a similar question with regard to a good coval bandish. Does the composition itself appear to move towards the Sama? Is it so designed, on the inside? Or is it only the singer who is able come to the Sama, just because he knows where it is ? Coming to the Sama, we believe, should be an excellence of the

composition itself. Similarly, the rhythm itself should seem to come back to the Sama. Now, this suggestion, that the Sama is the target of a refluent flow, is produced only when the approach to the Sama is prepared by using some boles of decreasing intensity. Proper accentuation of the 'boles', as regulation - increase or decrease - of their intensity, is thus demanded by the very grammatical idea that the Sama is also the point of return:

Accentuation in rhythm is, however, of many different kinds. The Sama itself may appear not as a rhythmic climax, but as a major source of (a kind of) serial sweetness. This happens where the Sama occurs repeatedly, like this:

And, finally, instead of appearing as the distinct source of sweetness, the Sama may itself seem to ne enveloped in a gentle, flowing sweetness, as a mere felt accent:

In the end, we may summarize the discussion which followed the presentation of this Paper by listing (most of)the questions put to us, and our ansers to them, now refined in the light of subsequent thought:

1. Is the Sama there in rhythm of Karnatik music

to Here, in our present state of knowledge, we

find it impossible to give a <u>definite</u> answer. But, on the other hand, we are not so convinced as, the questioner (Dr. Deva) seemed to be that Karnatak rhythm does <u>not</u> have a <u>Sama</u>, in the sense that the Hindustain system has, though it does have inner sub-divisions and accents. All that we can here say circumspectly is as follows:

a) The answer would depend on what it really means to say that a rhythm has a <u>sama</u>. Surely, the Karnatak drummer too holds onto the chosen <u>extent</u> of beats. In other words, the same measured extent of rhythm is played repeatedly, or is at least continually kept in mind where what is played is a pattern and not the basic measure. Now, if we take the case of <u>playing</u> the basic measure a number of times, and if we find- of which we ourselves are not sure-that the first beat each time is the <u>Same</u> syllable, then this, along with the repeated similarity of inner accents and divisions, will surely warrant the suggestion that here too a <u>sama is</u> there, even if it is not <u>said</u> to be a '<u>sama</u>'. for the rhythm in such a case would seem clearly cyclic.

b) It may be - and here too we are quite unsure - that in Karnatak music we do not have (as many as in the Hindustani fold) rhythmic patterns which seems clearly to aim at, and to prepare for, reaching the <u>Sama</u>, so that the first beat here does not seem central, and is therefore not the <u>Sama</u> in the same way in which <u>is</u> in Hindustani rhythm. But, on the other hand, we remember it distinctly that in the 'qugalbandi(which followed

our paper, the mridanga often reached the first beat as the climax of well-designed, though certainly brief, flourishes.

c) Finally, we ask, does not the first beat of the basic measure enable the Karnatak drummer to check and steady the speed of his playing? If it does - and we guess this cannot but be so - that would be further warrant for saying that there is Sama in Karnatak rhythm also.

2. Should not the (allegedly) cyclic character of Hindustani rhythm be demonstrated without the aid of a lahra ?

Yes, it should be done. But, that we did not in fact do so, does not mean that the required demonstration cannot be done. In simple recitation of the rhythmic syllables (or parhant) there may be no lahra at all; and yet, largely because of the orientation of the patterns recited, the rhytim can seem clearly cyclic, and the sama quite.

3. May the sama be spoken of as the graha or nyasa of rhythm?

Our answer would here be in the negative if, as seems necessary, Sama is taken in its entire range of meaning brought out in the Paper. Svara -s which are (places of) graha or nyasa are (perhaps) never indicated by deliberate avoidance; but, as brought out by us, the Sama is often so suggested. Moreover, in so far as the words in question are conventionally used with reference to the melodic aspect of our music, it would create needless confusion if they are used also in relation to our rhythm.

4. How, if at all, is the Sama related to the concept of Samayastha and the trigunas?

'Sama' may be said to be related to the first italicized word in so far as, besides serving other function, it is a beat with the help of which we often check and steady our laya. But, as for the relation of Sama to the three qunas, we still have no idea at all.

5. **When did the word theka enter the discourse of Hindustani music.**

This too came a little after the time allotted for question; and this again we could not, and still cannot answer. But we did feel greatly encouraged by the reactions of the knowledgeable audience. Besides, during the course of his comments after our Paper, Principal B. R. Deodhar (Bombay) agreed that, in vocal music, the suggestion of an approach to the Sama is heightened if the approach traverses a greater number of 'ascending' or 'descending' svara. This was, for us, a welcome confirmation of one of the suggestions made by us in our (earlier) paper on Aamad presented, a few years back, to the Akademi Seminar on 'Science and Music' in New Delhi.

APPRECIATIVE RESPONSE TO MUSIC

Arvind Mangrulkar.

That art evokes response is a truism. It is, however, not easy to say why people respond to art naturally and readily. An aesthetic response to art may take different forms and my demand a variety of requirements depending upon the nature of a particular art and the propensity of the enjoyer. Only a few seem to be gifted with a pliant responding mind to a wide range of different arts. Though the question as to why this should be so, and why others should be apathetic to arts is worth going into, we are not concerned with it here. I shall confine my remarks only to Indian music and the enjoyers' appreciative response to it in <u>mehfils</u> or concerts.

Not being competant to deal with the Karnatak style of music I shall refrain myself from speaking about it. However, appreciative respense to music in the midst of concert is a common phenomenon even in Sourth Indian music concerts, and so I shall be happy if some of my remarks become applicable to that field.

It is a typically Indian phenomenon to shower aesthetic responses on the artist-singer as he performs. The responses are piecemeal, and yet the general feeling of the enjoyers ultimately culminates into a homogeneous experience of a complete art form. Though such an ejaculation of aesthetic responses is not seen in a Western Music concert, it will be wrong to assume that the listeners there are not moved as deeply as their Indian counterpart. (This seems to have been common even European music about a century ago-B.C.D. See Arthur Rubenstein, <u>My younger Days</u>. Knop . 1973).

In Indian concerts an appreciative response not only expresses the listener's aesthetic rapture, but encourages the artist-singer in no small measure. This is why the artiste often says humbly, - "It is not I who am singing, I am urged by you to sing! " It is as much as to say, "You are singing. I am just as well a peg, a support for your musical expression and sensibility." Even if we make an allowance in this rather exaggerated remark, it carries a germ of truth, inasmuch as no Indian concert is worth its name without a family union of sensitive, appreciative listners.

A listener is mentally prepared before he goes to a mehfil. He knows the singer, or sometimes he does not know him. Perhaps he has never heard him or heard of him before. In any case he does not know at all what he is going to sing or how. He is all eagerness just to listen to him as best as he can. His mind thus becomes very delicately balanced for listening in. Those who are deeply embedded into the conception of a gharana many times become poor listeners as they have groomed their mind to listening to a particular groove of music that their ear is trained for. The mind of such listeners is rather hardboiled and less open for new and out-of-the-way ideas and approaches. Their hardened mind is hardly open for fresh breezes. Being crystallised, their thought process gets the upper hand of their sensitivity. In short, their listening faculty works at its lowest and whatever they listen is immediately pigeonholed into their responses-'traditional responses.

This, of course, does not imply that a listener should be devoid of any knowledge about music and its traditions. Far from it. In fact, such knowledge may add to his enjoyment in mehfils. But even without such formal knowledge a sensitive listener, free from pre-conceptions and gifted with or steeped in a rich high taste,

is a better listener. It is not a musician alone that practises sadhana, but a listener also has to undergo sadhana for several years before he can take his rightful place in a mehfil as a listener. Such a listener does not listen passively, but sings vibrantly and psychologically and almost rises to the level of the artist_performer. He is a 'mute artist' or a 'potential singer'.

Basically speaking, we listen to three factors in music: (1) Tone (i.e. svara), (2) Rhythm (i.e. laya), and (3) Form All these three factors are brought into play simultaneously during the performance, but our rapturous responses arise from different mental make-ups in relation to these three constituents. As far as svara and tala are concerned, there is no compromise. Our expectation in regard to the svara must be fulfilled one hundred per cent, - a whit less. We would hardly suffer or excuse an artiste that goes out of tune, how-soever minutely, or fractionally. We, as if, know the svara; we have the precise svara in our mind; and we want or expect the artiste to send forth sympathetic vibrations in our mind by his own svara. This union of two svara's one of the artiste and the other of the listener, - culminates immediately into a rapturous appreciative response. It is, so to say, the wedding of two souls. The two are one; they become one. It is a testament.

With laya it is different. Svara creates a feeling or immensity in our mind; it widens our horizon. When the union of the two svara-s is absolutely perfect (as in case of Abdul Karim Khan's music), the one-ness or non-duality becomes one immense, ever-widening and ever-deepening joy. But svara by nature is static. When the svara is held or suspended on the play of rhythm, brought about by tala, which is man-made, it becomes mobile. (tala is an instrument of creating infinite waves of rhythm i.e. 'laya'). It is a common experience that

anything that moves holds our attention, as a moving train, or surging waves, or a trembling leaf, or a running brook, or a flying aeroplane. The mobility given to svara not only infuses life into it, but becomes by itself living. The svara and laya together thus create a feeling of immensity and 'living'. This unique togetherness of immensity and mobility in the form of svara and laya gives to the mind a sense of sympathetic living. Like life, rhythm, which is essentially mobility, is full of unexpected turns and is charged with aesthetic surprises. But unlike svara rhythm imparts unexpected mobile shocks of joy to the mind and it is this unexpectedness which is the hall-mark of rhythm. Again, unlike svara, it is the non-fulfilment of our expectations. Music, hosoever tuneful, is likely to bring about tedium and lifelessness, if it has no play of rhythm to show. Going along the flow of rhythm, you unexpectedly (not 'suddenly'-) come across a bend or a twist or a movement which is absolutely new and other-wordly. Such a creative state immediately stimulates an aesthetic response. In short, svara rests on fulfilment of tonal expectations, whereas laya depends on non-fulfilment of mobile forecasts. However, both bring aesthetic rapture in different directions.

Both svara and laya singly, are unable to build up and create a 'FORM' if they do not join hands with each other. Extreme emphasis on svara makes music slothful while inordinate stress on laya makes it cluttering and mechanical. Svara creates a feeling of immensity, but rhythm gives to it an order and demarcates it. This demarcation of svara by laya creates an undulating sculpturesque form, which neither can do singly. It is here that words play a significant role in making form stand out in distinction. Words, by way of articulation not only mark out the tonal pattern of a melodic composition, but hand in hand with rhythmic movement, build up the desired Form. This is done with a number of musical embellishments, that are too well known to need a mention of elucidation here.

How is this Form built up ? Music, being a temporal art, disappears as soon as it is spun out. Is the Form then built up from memory ? - I think not. As a musical Form is being created, every little detail of svara, laya and tala, embellishments, words conjointly becomes a part of our experience, and the Form is built up 'in experience', and not form memory or recollection. Memory operates only when the mehfil is over. As we listen to music, we have a rapturous experience of tonal beauties, varieties of rhythmic patterns, verbal niceties and their cumulative perception. All this becomes a part of our experience. Compared with 'experiencing' of music, its mere memory is death. For the Form built up in experience is organic and ever-growing, and no amount of verbal expression, even of a powerful ecstatic quality, can match it. This is a special feature of a performing art like music.

Appreciative response is a dimensional dialogue between the artiste and the listener. And any dialogue, to become a real one, must leave a significant INTERVAL between the two. The artiste never has a complete idea of the entire musical gamut that he is going to present, nor is the listener aware of it. It is in such a circumstance that the Interwal works and blossoms up. By 'Interval' is not meant here a respite, or rest, or silence, or hush in time, which leads to the snapping of ties that are built up. It is something more. The artist, traversing a certain field in svara, laya and Form, leaves a significant Interval for the listener who has also gone along with him in experiencing it; and the listener gets soaked into it. He not only enjoys and responds to it, but gets the feel of the meaningfulness of music. The artiste, perhaps, stops for a moment,

but during that momentary stopover open up new vistas and avenues before the listener; and the listner, too, after responding appreciatively to him, takes a breath in experience and rises to his level. It is this moment in music which I call INTERVAL. This INTERVAL establishes a rapport between the artiste and the listener. Significant space in painting plays the same part as INTERVAL does in music. The movement in dance too has such an Interval. An artiste who does not know the judicious use of this INTERVAL is hardly likely to establish a rapport between him and the listener. Verbal appreciative response follows very closely this musical INTERVAL, which takes on the form aesthetic experience in music.

The INTERVAL THEORY, as I call it and which I have tried to explain, can be worked out in other fine arts also. In music, however, it gets slightly modified in accordance with the various other forms of music like thumri, tappa, dadra, ghazal etc. as different elements like the verbal expression in thumri, or a typical build-up of 'tan-patterns' in tappa become more prominent than the other elements in expression. The rhythmic expression, for instance, is kept extremely subdued in thumri in comparison with its place in the khyal form; and in ghazal the tonal and rhythmic elements further recede into the background. Word reigns supreme in this field, But in any case the musical INTERVAL THEORY explains the nature of the appreciative response in Indian concerts of music.

A STUDY IN THE PSYCHOLOGICAL RESPONSE TO RAGAS.

(SEMANTIC DESCRIPTIONS AND SYNESTHETIC RELATIONS OF RAGAS).

B. C. DEVA AND K. G. VIRMANI

Introduction

This paper presents an empirical study of psychological responses to a few raga-s of Indian classical music. The chief aim of these researches was to make a comparision of the mood 'created' with the mood 'intended' by the raga-s used as stimuli.

Background

In an earlier study of the series in Indian Listeners an effort was made to quantify feelings aroused by classical Indian musical (Hindustani) excerpts. The technique employed for quantifying the nature of moods aroused by musical samples was that of semantic differential.

In the above experiment, four musical excerpts were played to 37 respondents. They noted their responses on a specially designed twenty-two bipolar adjective semantic differential scale which were later on subjected to a multivariate statistical analysis. In this analysis a comparison of the mood 'created' with the mood 'intended' by the musical compositions were made. The results of analysis showed similarity between the two.

The second study of the series now being reported was undertaken to avoid some of the limitations to an extent.

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*The present paper is an abstract of Research Report II of Sangeet Natak Akademi, New Delhi.

Besides this, the scope of the experiment was further enlarged to examine whether respondents associated any specific colour, season and time of the day with a raga (synesthetic basis of Indian music theory.) Efforts were also made herein to study the meaning of music in relation to certain bio-data of the respondents.

In terms of the issues explained above, the scope of the broad-based work was as under:-

A Meaning of Music

To compare the intended mood of a raga as traditionally associated with it with the mood crated in terms of psychological responses given by the respondents.

B Inter-sensory and Temporal Relations

To study whether respondents associated any particular colour/season/time of the day with a particular raga.

THE PRESENT PAPER

Sample

Research findings of the present paper are based on the responses of 228 individuals, both males and females of various age groups, having different types of educational background and varied training in classical music.

Stimuli

It is very important to stress at the outset that a raga is a statistically structured stimulus. As such, even its internal components (notes, temporal proportions, and so on) are variable within certain limits.

THE MEASUREMENT TECHNIQUE

Two measurrment techniques were provided. The first

was for measuring the created mood of a raga excerpt and the

Method of Analysis

In this section we may only make a mention of the statistical method of (i) factor analysis which is basic to the study of meaning of music and (ii) chi-square test for measuring inter-sensory and temporal relations of music.

RESULTS

Two types of results, namely, results on 'meaning of music' and results on 'association of a raga with colour/season/ time of the day' are given.

Interpretation of results: Conclusions

The Dimensions of Meaning for Bhairav have the following in order of preference: the raga has empathy, compassion (karuna), but is vital, positive, courageous (veera, bhayanaka) suiting very well its name, 'Bhairava'. It has also tranquility (santa).

The intersensory and synesthetic associations are:

Colour	White/Yellow
Season	Autumn
Time	Early morning/ Evening

These relations are extremely revealing considering that quite a sizeable part of the population was not trained in classical music.

The tally between the intended, traditional moods, colour, season, and time with experimental responses is staggeringly complete. The exceptions are: a) yellow also has been included and b) evening as well. Here we may recall that raga Gauri has the note of Bhairav but is sung in the evening.

Three very important aspects require repeated emphasis:

second for gauging the association of a raga with colour, season and time of the day: the former by semantic differential technique; the latter by 'make-a-choice' technique. A few explanatory points are given below:

Adjective pairs chosen

Twentyseven adjective pairs were used. Those 27 adjective pairs were framed on the basis of nine raga-s of Indian aesthetic theory.

Experiment Proper

The 228 respondents, usually made available as a batch of 30 to 40 individuals, were seated comfortably in an auditorium, and instruction sheet, blanks of the format, as also personal date blanks were distributed among them.

They were given two minutes of music to establish the mood. The raga excerpt was repeated for two minutes and they were then asked to record their impressions on the format during the replay.

Scoring Procedure

The conversion of adjective choices of a sample of respondents into quantitative terms was the next step. The following illustration, wherein we have taken the case of Sad-Happy polarised adjective, makes quantizing or metrization clear.

Adjective		Scoring Weight
SAD	....	
Extremely	....	1
Quite	....	2
Slightly	....	3
Both or neither	....	4
Slightly	....	5
Quite	....	6
Extremely	....	7
HAPPY		

musical training. Hence, the response has, perhaps not been conditioned by individual or social learning, consciously: it may be one of racial memory.

b) Only alap has been used. Even so, the very significant tally between the traditionally intended and the elicited emotions show that the raga form is more important than non-definitive elements.

c) Certainly, the raga in form and rendition must have changed during the ages. Yet there is close correspondence between its accepted ethos of about 300 years ago and of now.

These three point to an inference that, at least in the case of Bhairav, we are dealing with some elemental melodic nucleus: what may be called the tonal archetype. This has remained constant, manifesting itself differently in different paychic climes.

Further, it is possible that the basic raga- rupa (form) expresses a sthayi bhava (definable emotional state) and non-definitive elements like gamaka, octave levels and tempo express associated sanchari bhava (transient sentiments).

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SOME CONCEPTS IN ANCIENT INDIAN AESTHETICS

K.P. JOG

I propose to place before you my view on Bharata's theory of rasa, first in the context of music and then consequently in the context of natya. I proceed this way, because almost every work on Indian music devotes some place (many times, lot of it) to the traditionally handed down theory of rasa with its sundry details.[1] And often has one failed to notice the significance of rasa in the context of music, though one has been led (or conditioned) to accept the relationship of certain svaras and/or ragas with rasa[2]. This has happened so, at least in my case.

I clarify my position with the help of some passages which is pathya 'that which is to be recited' in the plays (not merely Kavya, i.e. literature) or great masters like Kalidasa and Sudraka. First, I take a passage from the prastavana 'prologue' of the Abhijnanasakuntala - I quote the relevant passage in Sanskrit and Prakrit.

It reads :

नटी - अणन्तरकरणिज्जं अज्जो आणवेदु।

सूत्रधार - किमन्यदस्याः परिषदः श्रुतिप्रसादनतः। ---तदिममेव तावदचिरप्रवृत्तमुपभोगक्षमं ग्रीष्मसमयमधिकृत्य गीयताम्।---

नटी - तह। (इति गायति)
ईसीसिचुम्बिआइं भमरेहिं सुउमारकेसरसिहाइं।
ओदंसअन्ति दअमाणा पमदाओ सिरीसकुसुमाइं।।

सूत्रधार - आर्ये साधु गीतम्। अहो रागबद्धचित्तवृत्तिरालिखित इव सर्वतो रंगः। तदिदानीं कतमत्प्रकरणमाश्रित्यैनमाराधयामः। Contd.

नटी - णं अज्जमिस्सेहिं पढमं एव्व आणत्तं अहिण्णाणसाउन्दलं णाम अपुव्वं णाडअं पओए अहिकरीअदु त्ति।

Contd.

सूत्रधार - आर्ये सम्यगनुबोधितो अस्मि। अस्मिन्क्षणे विस्मृतं खलु मया। कुतः
तवास्मि गीतरागेण हारिणा प्रसभं हृतः ।
एष राजेव दुष्यन्तः सारंगेणातिरंहसा ।।[3]

Actress : May you command now what I have to do next.

Manager : What else than to gratify the listening audience? Well, then, sing about the season of summer which has just set in and is suited to enjoyment ----

Actress : As you command. (sings)

Youthful ladies wear Sirisa flowers as ear-ornaments, taking pity on them that have (very) delicate filaments and are (only) gently kissed by the hovering bees.

Manager : Well sung, darling! The audience all aroung seems to be painted, as it were, since their hearts are captured by the melody (of your song). Tell me now by what performance of a prakarana we shall please the audience.

Actress : Have you not told me, dear, that we have to perform the Abhijnanasakuntala ?

Manager : Yes, darling! You have well reminded me. I had quite forgotton that, at this moment. Do you know why?

I was forcibly carried away by the attractive melody of the song you have (just) sung - yes, like this king Dusyanta, by the swiftly (running) antelope.

The purpose of the song is already stated : it seeks to please the ear of the audience. Apparently the various factors responsible for rasanispatti 'production of rasa' viz. vibhava, anubhava and vyabhicarin are absent here.[4] The effect of the song on the audience is that, owing to the raga their mental activity is arrested and they look as if painted in a picture. The Sutradhara, on his part, has forgotton what he was about to do. He is completely carried away by the attachive and pleasing raga of the song. It is obvious that the introduction of the song in the prologue has achieved its purpose - the dialogue has already made it clear!

A few technical details about the song which are given by the commentator are, nevertheless, very interesting in that they raise a certain problem. He says about the song :

अयं त्रिंशन्मात्रदलद्वयरूपो द्विपदीनामा लयभेदः। तदुक्तमादिभरते - वक्ष्ये
अंगादिसंभिन्नं नाट्यगानमतः परम्। मध्यमोत्तमपात्राणां नाटके सिद्धिदायकम्।।
इत्यादिना द्वादशभंगाः षडुपभंगा द्विचात्वारिंशल्लयभेदाश्चोक्ताः तत्र
द्विपदीनामा प्रथमो लयभेदः। तल्लक्षणं तत्रैव - विलम्बितलया यत्र गुरवो
द्विपदी तु सा। श्रृंगारे करुणे हास्ये योज्या चोत्तममध्यमैः। अवस्थान्तरमासाद्य
गातव्या साधमैरपि। इति। अत्र गुरुस्तालरूपो ज्ञेयः। ग्रामरागेण
ढक्काख्येन चास्या बन्ध इति ज्ञेयम्। एवं च गीतिः।

"This is a variety of laya, called Dvipadi, consisting in two parts, each of thirty moras. Thus it is said in Adibharata :

> 'Now I shall speak about the song in a drama, which is characterised by bhanga etc. (and) which brings success to characters of secondary and highest (importance) in a play.'

With this verse in the beginning, (has its author) described forty-two varieties of laya, divided among twelve (principal) bhangas and six subsidiary bhangas. Among them, the first variety of laya is called Dvipadi. Its definition (is also given) there in the same work :

> "Where there are long (moras) with a prolonged laya, it is Dvipadi. It should may be used in (rasas) Srngara. Karuna (and) Hasya, by characters of highest and secondary (importance). It should/may be sung also by characters of the lowest (importance) on rising to a higher status".

Here, (i.e. in the song of the Actress) the long mora should be noted as of the nature of tala. It should be noted that its composition is in the gramaraga called Dhakka. This is Giti.[6]

Indeed, without going into the technicalities of music, one could ask : Is this song connected with the intended production of Srngara or Karuna or Hasya? But I would leave this, for already the purpose of the song is mentioned - it is : 'pleasing the ear of the audience'. Thus, this instance of a song (in the part of a play) would show that there need not be an absolutely intimate relationship between song and rasa. But one might object to this my statement on the ground that the song which I have cited is not in integral part of the play and, therefore, the technical details from Bharata should not be brought into discussion. I should, therefore, invite attention to two other sings which are integral parts of two of Kalidasa's plays.

Contd.

The first song is the famous song of Hamsapadika it occurs at the beginning of the 5th Act of the <u>Abhijnanasakuntala</u>. The audience has just witnessed Sakuntala's departure from Kanva's hermitage and it is going to see what reception Dusyanta would accord her. Of course, the audience is well aware of the course of Durvasas hanging on her. And the 5th Act begins with some sweet and indistinct notes of a song followed by a conversation between Dusyanta and the Vidusaka - again, once intervened by the same song distinctly sung. I quote the song together with relevant dialogue :

विदूषक :- (कर्णं दत्वा) भो वअस्स संगीदसालन्तरे अवधाणं देहि।
कलविसुद्धाए सरसंजोओ सुणीअदि। जाणे तत्तहोदी हंसवदीआ
वण्णपरिअअं करेदि त्ति।

राजा - तूष्णीं भव। यावदाकर्णयामि।
(आकाशे गीयते।)
अहिणवमहुलोलुवो भवं तह परिचुम्बिअ चूअमंजरिं।
कमलवसइमेत्तणिव्वुदो महुअर विम्हरिओ सि णं कहं।।
अहो रागपरिवाहिनी गीतिः।

विदूषक - किं दाव गीदीए अवगओ अक्खरत्थो।

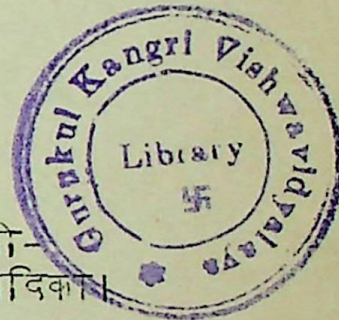
राजा - (स्मितं कृत्वा) सकृत्कृतप्रणयो यं जनः। तस्या देवीवसुमतो-
मन्तरेण मदुपालम्भमवगतो स्मि। ---मद्वचनादुच्यतां हंसपदिका।
निपुणमुपालब्धो स्मीति।---

विदूषक- जं भवं आणवेदि। ---(निष्क्रान्तः)

राजा - किं नु खलु गीतार्थमाकर्ण्येष्टजनविरहादृते पि बलवदुत्कण्ठितो स्मि।
अथवा
रम्याणि वीक्ष्य मधुरांश्च निशम्य शब्दान्
पर्युत्सुकोभवति यत्सुखितो पि जन्तुः ।
तच्चेतसा स्मरति नूनमबोधपूर्वं
भावस्थिराणि जननान्तरसौहृदानि। (पर्याकुलस्तिष्ठति)

Jester : I say, friend, turn your attention to the interior of the music hall. Here we hear harmonious sounds in a soft and clear song. I belive, Queen Hamasapadika is practicing singing (lit. making acquaintance with various notes).

King : Silence, let me hear. (The song is heard).
'O Bee, how is it that you have now forgotton the mango blossom, having ardently kissed it - (ever) longing eagerly for fresh hony - now resting content with your mere stay in the lotus ?

Contd.

King : Oh, what an impassioned song!

Jester : Why! Have you understood the meaning of the words in the song?

King : (with a smile) This person, I have once loved. Therefore, she has served me with a taunt on account of (my recent attention to) Queen Vasumati ...(Go), tell her on my behalf, 'I am well reproached, (my darling)!

Jester : As you order (Goes out)

King : (To himself) why indeed have I become so very pensive on hearing the contents of the song, even though I am not separated from any (very) dear person? Or rather, (I should say:) when a person (lit. being who is) happy (in other respects) becomes full of ardent longing on seeing charming objects and hearing sweet sounds, then indeed he remebers, his mind, the friendship of former births, firmly footed in his heart - of course, without being aware of it. (Remains pensive)

There are two obvious aspects of this song; one is purely musical - it is bereft of its contents, the other has contents of dramatic relevance. This letter is, I thank, <u>not much important</u> for purposes of our discussion, though it serves great dramatic purpose as noticeable in Dusyanta's words : "Why indeed am I rendered so very pensive on hearing the contents of the song even though I am not separated from any (very) dear person?"

I leave out this(i.e. the latter) aspect of the song. But the purely musical aspect also does

contd.

not fail to serve an important dramatic purpose. It is used, I believe, as an <u>uddipana vibhava</u> 'an excitant' for the development of the plot in the Act - these details I omit. However, I must observe that Kalidasa has used music of Hamasapadika's song for producing <u>rasa</u>. A few technical details from Raghavabhatta's commentary would clarify my ideas; he writes:

कला मधुरास्फुटध्वनियुक्ता। अनेन सुशारीरमुक्तम्। 'भारी तु ध्वनिमाधुर्यरक्तिगाम्भीर्यमार्दवैः'। इत्यादिना सुशारीरस्य गुणा उक्ता रत्नाकरे। अत एवाग्रे 'लक्ष्यते रागभरिता' इति। विशुद्धा शुद्धा नाम गीतिः। ग्रामरागजनिकेत्यर्थः। तस्याः स्वरसंयोगः। तत्सम्बन्धी स्वरालाप इत्यर्थः। तदुक्तं तत्रैव। --- 'साधारणा विशुद्धा स्यादवक्रैर्ललितैः स्वरैः।' इति।[8]

"<u>kala</u> 'soft' means (a note) with sweet and indistinct sound. By (the use of) this adjective, (the author has) expressed the character of a good composition. The (Samgita) - <u>Ratnakara</u> has stated the excellences of a good composition in the words 'weighty however (is a compostion) by sweetness of sound, passion, depth and softness' etc. That is why (the words) '<u>laksyate ragabharita</u>....' <u>visuddha</u> means a song <u>called</u> <u>suddha</u> 'clear harmonious'. It means a song giving rise to a <u>gramaraga</u>, <u>tasyah</u> <u>svarasamyogah</u> means recital of various notes in it. This is characterised just there (i.e. in the <u>Samgitaratnakara</u>) thus : '(A song) is generally clear (and) harmonious on account of simple and charming notes'. <u>Varṇa</u> - <u>paricaya</u> ' familiarity with notes' is explained as <u>sthayyarohyyavarohyatmakaganakriyabhaṣa</u> 'practicing the recital of notes, permanent, ascending and decending'. <u>ragaparivahini</u> is also explained as '<u>ranjanam</u> <u>ragah</u>/<u>atyantaranjika</u> 'that which delights is <u>raga</u>. It is extremely delightful. Here the song is connected with <u>dhatu</u> it is not to be described as a <u>giti</u>[9].

P.T.O.

The effect of the song, which I said is useful as uddipana Vibhava, is expressed in Dusyanta's words :
किं नु खलु गीतार्थमाकर्ण्येष्टजनविरहादृते ऽपि बलवदुत्कण्ठितो ऽस्मि।

Raghavabhatta paraphrased these words thus :
मधुराद्धृतिसुखदाह्लादान्गीतादीन्निशम्य---सुखितो ऽपि विरही भवति।
"Having heard the sweet notes like song etc. which please the ear, even a man in happiness begins to feel longing (for someone). jantuh means all beings, paryutsukibhavati jananan-tarasauhrdani and Raghavabhatta explains :

अत्र स्वस्य (=दुष्यन्तस्य) शकुन्तलाविषये जन्मान्तरीयो---अनुरागो गम्यते[22]।

"Here is understood by suggestion Dusyanta's love for Sakuntala which sprang up in earlier life(or lives)". And thus is suggested the continuity of permanent love. He explains the word nunam as niscitam (and not otherwise) with an emphatic assertion that the verse is an instance of the figure of speech Kavyalinga 'poetic cause' on accourt of rasotpadakakaranasyokti 'the mention of a cause for the production of rasa' reveals how music acts as a factor in the production of rasa, viz. Srngara which is to develop out of rati".

The second song is from the Malavikagnimitra. This I should discuss in rather more details, for Malavika (the heroine of the play) is to sing the song and then express the contents (viz. emotions etc.) of it with suitable gesticulations and dance. Kalidasa employs all these means of natya with a view to producing the rasa, called ayogavipralambha srngara which is explained as

सम्प्राप्तेः प्रागसंगो यस्तमयोगं प्रचक्षते[22]

'They describe ayoga as the state of non-union before actual meeting? Kalidasa has carefully arranged every detail of this song recital. Thus, he has first arranged mrdangadhvani 'the beating of the drum' which produces a feeling of delight in the audience, viz. parivra-jika) 'the female ascetic', the king and others ... See how the female ascetic expresses her joy-

परिव्राजिका - हन्त प्रवृत्तं संगीतकम्। तथा ह्येषा
जीमूतस्तनितशंकिभिर्मयूरैर्
उद्ग्रीवैरनुरसितस्य पुष्करस्य।
निर्ह्रादिन्युपहितमध्यमस्वरोत्था
मायूरी मदयति मार्जना मनांसि[23]

"Female ascetic : Ah. Music has begun! For this note of the drum which is dear to pea-cocks, delights the ming, deep resounding, beginning with the high pitched middle tone (of the drum, I say) answered by the peacocks with necks erect, suspecting that it is the thunder of rain cloud".

I avoid the details concerning <u>mayuri marjana</u> that are given by Bharata.[14] A. gnimitra, the hero of the play, also says :

धैर्यविलम्बिनमपि त्वरयति मां मुरजवाद्यरागो यम्[१५]

"This <u>raga</u> in the beating of the drum hastens me even if I have tried to maintain fortitude". Here <u>murajavadyaraga</u> means <u>murajavadyasya</u> <u>ranjakatvam</u> 'the delightfulness of the (beating) drum' and <u>tvarayati</u> as <u>sambhramayati</u> puts me in confusion. In connection with this situation, it is worth-noting that the commentator Katayavema observes :

अत्र नृत्यदर्शननिश्चयान्ते प्रथमांकार्थे समाप्ते पि तमसमाप्यैवोत्तरांकादौ--- प्रतिपाद्यामा: संगीतरचनाया: निपातनादंकावतरणं नामार्थोपक्षेपकमुक्तं भवति।[१६]

'Though here the plot of the 1st Act, viz. deciding to see the dance performance is complete, still there is a mention of the musical recital (etc.) to be presented in the subsequent Act and, therefore, there is a dramatic device called <u>ankavatarana</u>.'

Now what Malavika is going to present is Sarmistha's composion with a <u>laya</u> in the middle and consisting of four <u>padas</u>. This is explained by Katayavema as :

तस्या: (=शर्मिष्ठाया:) कृति: काव्यम्। लयमध्या लयेन तालकालेन मध्या मध्यमानुयुक्ता। चतुष्पदा चत्वारि पदानि खण्डानि यस्या: सा यथोक्ता। ---अत्र शृंगाररस्य प्रतिपाद्यत्वाल्लयमध्येत्युक्तम्। तथा चोक्तं भारतीये - 'शृंगारहास्योर्मध्यलय:। करुणे विलम्बित:। वीररौद्राद्भुतबीभत्स भयानकेषु द्रुत:।'[17]

Sarmistha's compostion is a song (lit. poetry). It is of middle scale of notes on account of the time taken by <u>tala.</u> It is <u>catuspada</u> 'consisting of four parts'. It is called <u>layamadhya</u> since it depicts <u>Srṁgara</u>. For this it is said in Bharata's work : In <u>Srngara</u> and <u>Hasya</u>, there should be <u>madhyalaya</u>. In <u>Karuna</u>, prolonged. In <u>Vira</u>, <u>Raudra</u> <u>Adhhuta</u> <u>Vibhasta</u> and <u>Bhayanaka</u> it is quicker.

This explanation seeks to show the intimate and conventionally accepted relation between music and <u>rasa</u> (which is to be produced).

Let us then come to the song itself (as introduced by Kalidasa)

मालविका - (उपगानं कृत्वा चतुष्पदवस्तु गायति)
दुल्लहो पिओ मे तस्सिं भव हिअअ णिरासं
अम्हो अपंगवो मे परिप्फुरइ किं पि वामो।
एसो सो चिरदिट्ठो कहं उण उवणइदव्वो
णाह मं पराहीणं तुइ परिगणअ सतिण्हं।।
(ततो यथारसमभिनयति)

Malavika : (Approaching with a song, recites the composition of four parts).

My beloved is hard to obtain; be without hope with respect to him, O my heart. Ha! the outer corner of my left eye is throbbing; how is the lover, (who is) seen after a long time, to be obtained? My lord, please accept that I am full of

longing (for you though) I am helpless
(lit. dependant on others for every
thing.
(Then she acts according to the rasa
in the song).

The words upaganam krtva are explained as ragadiptam krtva 'making it bright by a raga' and, therefore, it is indicated that the matter of the composition is set to tunes with a view to making it more effective. Again, the stage direction which Kalidasa has given is equally telling. Malavika, i.e. the actress who plays the role of Malavika, acts in keeping with the rasa which the song has the potentiality to develope. The commentator's paraphrase of the stage direction is tato gananantaram yatharasam rasanukulam abhinayati 'Then, after the song is over she gesticulates according to and in conformity with the rasa.' What is more important is the elucidation of the bhavas in the song which develope into rasa. Thus the commentator states :

अत्र चतुष्पद्या: पादचतुष्टये क्रमेण निर्वेद: सविस्मयो हर्षश्चिन्ता
दैन्यं चेति संचारिभावास्तदनुभावैर्मुखरागादिभि: सम्यक्प्रकाशिता
इत्यनुसंधेयम्। १६

'We should note here that, in the four padas of the catuspadi the poet has revealed nirveda 'dejection', vismaya 'surprise' harsa 'delight' and cinta 'anxiety', in succession, by means of the sancari-bhavas, anubhavas such as change on countenance etc. Yet more important is the conversation between the Vidusaka and the king for it explains the rasa-nispatti in some way. Thus :

विदूषक - (जनान्तिकम्) भो चउप्पदवत्थुअं दुवारीकरिदे तुइ
उवट्ठाविदो अप्पा तत्तहोदीए।

Contd.

राजा - सखे एवमेव ममापि हृदयम्। अनया खलु
जनमिममनुरक्तं नाथ विद्धीति गेये
वचनमभिनयन्त्या: स्वांगनिर्देशपूर्वम्।
प्रणयगतिमदृष्टवा धारिणीसंनिकर्षाद्
अहमपि सुकुमारप्रार्थनाव्याजमुक्त:।१०

Jester : Ha. (My friend, it appears to me that) the lady has made the composition of the four padas as an excuse and submitted herself to you.

King : (Yes. my) friend, my heart also does likewise. Indeed this (young girl) had addressed berself to me under the pretence of a delicate request in the song (with the words) : Know, my lord, I am devoted to you', acting according to the words and pointing to her own person since she saw no other way of revealing her love owing to Dharini's presence nearby'.

I drop the description of Malavika's dancing postures which also had contributed to rasaviskara, but I must invite attention to the female ascetic's observations. She says -

अंगैरन्तर्निहितवचनै: सूचित: सम्यगर्थ:
पादन्यासो लयमनुगतस्तन्मयत्वं रसेषु।
शाखायोनिर्मृदुरभिनयस्तद्विकल्पानुवृत्तौ
भावो भावं नुदति विषयाद्रागबन्ध: स एव॥१।

" The meaning was well conveyed (lit. suggested) by her limbs which were full of language, the movement of her feet was in perfect time, she was completely absorbed in the (presentation of) rasas; the acting was gentle, being based upon the measure of the dance; in the successive development of acting,

Contd.

> a bhava occupied the place of another, the series of emotions was the same (as was enshrined in the composition of the song".

However, song of the expressions in her statement demand particular attention. Thus rasesu tanmayatvam means rasavisayesu tadatmyam/ (rasatmata bhavatity arthah) 'Shr was one with the rasa to be presented' and the commentator's observation also is quite pertinent. He states :-

> अत्र रसशब्देनोपचारात्परितोषातिशयवत्त्वादिभावाः कथ्यन्ते।
> प्रकृतरसस्यैकत्वाद्रसेष्विति बहुवचनानुपपत्तिप्रसंगात्।[22]

'Here the word rasa conveys metaphorically the bhavas in their excellence; for otherwise the plural in the word would be unreasonable the intended rasa is to be just one'.

I believe that the foregoing is sufficient to clarify how Kalidasa would understand rasa-nispatti through the meaning of the song, gesticulation and dance etc. But I would revert to this latter after citing an instance from another reputed Sanskrit play, the Mrcchakatika. I refer to the 5th and 6th verses in the 3rd Act of this play, where Carudatta describes the state of his mind after attending a musical concert presented by Rebhila. He says :-

> वयस्य सुष्ठु खल्वद्य गीतं भावरेभिलेन।---
> रक्तं च नाम मधुरं च समं स्फुटं च
> भावान्वितं च ललितं च मनोहरं च।
> किं वा प्रशस्तवचनैर्बहुभिर्मदुक्तैर्-
> अन्तर्हिता यदि भवेद्वनितेति मन्ये।।

अपि च

> तं तस्य स्वरसंक्रमं मृदुगिरः श्लिष्टं च तन्त्रीस्वनं
> वर्णानामपि मूर्च्छनान्तरगतं तारं विरामे मृदुम्।
> हेलासंयमितं पुनश्च ललितं रागद्विरुच्चारितं
> यत्सत्यं विरतेऽपि गीतसमये गच्छामि शृण्वान्निव।[23]

contd.

'Indeed, the honoured Rebhila has well sung
today.
(Thus), his song was undoubtedly lovely,
sweet, smooth and clear, impassioned,
graceful and charming, Or what use
if I utter many praises! I am
rather inclined to believe that
there was a female covertly stationed
(in him).

And

To day the truth, even after the
time of his song (has already)
gone by, I just walked home hearing
the rising of sounds (of his song),
harmonious.

It must be noted here that Carudatta (really, Sudraka) does not mention the contents of the song which produce an ineffable delight. The song is mentioned as a thing of beauty, a joy for some continued duration. However, the word <u>bhavanvitam</u> which is paraphrased by the commentator Lalla Dikshit as <u>ratyanvitam</u> (where the <u>bhava</u> is <u>rati</u>) and Prthvidhara, as <u>sadabhiprayayuktam</u>, and alternatively as <u>ganabhiprayasucakasariracestavat</u>, is very important. It has some connection with the meaning of the song, but Carudatta did not feel it necessary to mention the same expressly. He expressed merely his experience of delight.

I do not propose to explain the technical terms a in these two verses which pertain to music, for that is not my purpose. I have cited these merely

to point out how a musical recital would result into pure delight and not inevitably lead to rasanispatti as one, conversant with the discussion of rasa theory in the context of music, would expect.

It would be legitimate, therefore, to raise the question as to why the theory of rasa occupies a place in works on music. As answer to this question arises out of the discussion of the passages from the plays of Kalidasa. The key-word is evidently rasa which is intimately connected with bhava in the first instance and then with abhinaya (which should include dance also). Also I have referred to the term rasa nispatti and translated it as 'production of rasa'.

The question is two-fold : 'whose bhava? and 'what is bhava? Bharata's answer to the question is noticed in the following three verses which have come down to him from tradition

विभावैराहृतो यो र्थो ह्यनुभावैस्तु गम्यते।
वागंगसत्वाभिनयैः स भाव इति संज्ञितः।।
वागंगमुखरागेण सत्वेनाभिनयेन च।
कवेरन्तर्गतं भावं भावयन्भाव उच्यते।।[24]

"That is bhava which is represented by vibhava (i.e. actor etc), but implied by anubhavas (i.e. acting) of speech, bodily movement and changes. bhava is so called because it manifests the bhava in a poet's mind by means of modulation of speech, bodily movements and changes in (suitable) acting.

Those who have got to perform some play should know these as bhavas, since they manifest the rasas and are connected with various (Modes of) acting'.

Obviously, Bharata uses the term rasa for signifying an art-object which is produced from bhava 'picture of some organised whole of a mood' in the poet's (i.e. playwright's) mind through the medium of vibhavas 'actors and or excirant factors' anubhavas 'the gesticulations of the actors' and vyabhicari-bhavas 'the subordinate moods revealed together with the principal one'. Bharata makes this yet more clear by means of a drstanta 'an illustration' : he writes :-

> यथा नरेन्द्रो बहुजनपरिवारो पि स एव नाम लभते नान्य:
> सुमहानपि पुरुष:। तथा विभावानुभावव्यभिचारिपरिवृत:
> स्थायी भावो रसनाम लभते।
>
> भवति चात्र श्लोक:
> यथा नराणां नृपति: शिष्याणां च यथा गुरु:।
> एवं हि सर्वभावानां भाव: स्थायी महानिह।।[२५]

'As a king, accompanied by a large retinue, along gets the title (of the king), not any other person, howsoever great (he might be), so also it is the permanent bhava that rises to the status of rasa (as it is) accompanied by vibhavas, anubhavas and vyabhicarins.

There is again a verse (in support) of this :-

'as the king is (great) among men, as the teacher is (great) among (his) disciples; so is the permanent, bhava great among all bhavas (which, together with the permanent, go to manifest the rasa).'

Further, Bharata explains this production of rasa in the following :

अत्राह - रस इति क: पदार्थ:। उच्यते - आस्वाद्यत्वात। कथमास्वाद्यो रस:। यथा हि नानाव्यंजनसंस्कृतमन्नं भुंजाना रसानास्वादयन्ति सुमनस: पुरुषा हर्षादींश्चाधिगच्छन्ति तथा नानाभावाभिव्यंजितान्वागंगसत्वोपेतान्स्थायिभावानास्वादयन्ति सुमनस: प्रेक्षका हर्षादींश्चाधिगच्छन्ति तस्मान्नाट्यरसा इत्यभिव्याख्यास्याम:। अत्रानुवंश्यौ श्लोकौ भवत:।

यथा बहुद्रव्ययुतैर्व्यंजनैर्बहुभिर्युतम् ।
आस्वादयन्ति भुंजाना भक्तं भक्तविदो जना:।।
भावाभिनयसंबद्धान्स्थायिभावांस्तथा बुधा:।
आस्वादयन्ति मनसा तस्मान्नाट्यरसा: स्मृता:।।३६

"Here one asks, What is rasa? The answer is, 'rasa is that which can be enjoyed'. (A further question arises :) How is rasa enjoyed? (the answer is:) As people of good tastes (lit. minds) experience delight etc. while they enjoy different tastes, partaking of food which is dressed with varous dainties; so also the audience of good tastes (lit. minds) experience joy etc. while enjoying various permanent bhavas accompaniew by speech and by bodily movement and changes manifested in various acting. That is how the rasas in drama are explained.

Here there are two verses (bearing on this point), traditionally handed down :-

'As people of good tastes enjoy food which is dressed with various dainties, so do the learned enjoy permanent bhavas accompanied by acting of various (subsidiary) bhavas - that is how the rasas in drama are explained'.

It is worth noting here that the meaning of rasanispatti which is expressed in Bharata's own words (not in those of some of this commentators, both old and modern) was accepted by great Aesthets like Pratiharenduraja (the preceptor of Abhinavagupta), Bhatta Tota and Vamana. This is seen from the quotations in Abhinava's commentary:-

नाट्यात्समुदायरूपाद्रसा:। यदि वा नाट्यमेव रसा:। रससमुदायो हि नाट्यम्। न नाट्य एव च रसा:। काव्ये पि नाट्यायमान एव रस:। काव्यार्थ

विषये हि प्रत्यक्षकल्पसंवेदनोदये रसोदय इत्युपाध्यायाः। यदाहुः काव्यकौतुके

प्रयोगत्वमनापन्ने काव्ये नास्वादसंभवः।[27] इति।

---संदर्भेषु दशरूपकम्।[28] इति।

----यद्वदयते - नाट्यस्यैषा तनुः।[29] इति।----;

(वाचि यत्नस्तु कर्तव्यो नाट्यस्यैषा तनुः स्मृता।
अंगनेपथ्यसत्वानि वाक्यार्थं व्यंजयन्ति हि।।)

'(It is said): rasas (are manifested/produced) from a conglomeration like dramatic presentation. Or rather, dramatic presentation itself is rasa. For, a conglomeration of rasas is dramatic presentation and rasas reside only in dramatic presentation. In poetry also, rasa is that which is presented like a drama. My teacher (has already expressed his view that) rasa is manifested from the poetic content when there is manifestation (i.e. experience) of a feeling that resembles one (on experiencing something) directly perceived. He has said in his Kavyakautaka :

'It is not possible to enjoy poetry unless poetic composition does not rise to (the status of) a dramatic presentation'---

(Says Vamana): 'Among various) compositions, dramatic composition is the best' ...

(Says Bharata himself): (That is taken as) the body of dramatic presentation..

(Effort has to be made (by a writer in his composition and by an actor in his speech) as regards speech; that is taken (by all) as the body of dramatic presentation, for bodily movements and changes and drapery (etc) reveal the meaning of speech').

I feel that this explanation of rasa-nispatti in naṭya should help in understanding how music would give rise to rasa. But, before I clarify that point I must invite attention to Bharata's attitude to gita/samgita expressed in his own words. Thus, while talking about the sources and formation of the natyaveda, he states ;

जग्राह----सामभ्यो गोतमेव।[30]

'He took ... only song from the samans'

And also he states the mythical account of Mahadeva's instruction to Brahmadeva that 'gesticulations are necessary for adequately expressing the meaning of the songs :

----महागोतेषु चैव ,थान्सम्यगेवाभिनेष्यासि।[31]

'You will enact the meaning of great songs'.

Again in the samgraha natyarthas, i.e. in the enumeration of the padarthas 'things' to be presented on the stage, he includes gana 'singing'; this view is restated in (as Abhinava's commentary on 6.10 shows) in the words of Udbhata's followers:

अभिनयत्रयं गोतातोद्ये चेति पंचांग नाट्यम्।[32]

'The threefold acting : song and instrumental music form the five aspects of dramatic presentation'.

Notice must be taken also of the line.

शारोराश्चैव वैणाश्च सप्त षड्जादय: स्वरा:।[33]

' There are seven notes, Ṣadja etc. produced by human voice and by lute!

and Abhinava's comment.

स्वरा: पाठ्यं गानसंगृहोता अपि पृथगुपात्ता: केवलानामपि प्रयोगोपरंजकत्वं यल्लदये दृश्यते यत्रान्तरालाप इति प्र...द्धिस्तदप्युपगमार्थम्।[34]

Cont'..

'Various notes are to be recited. (But) even if they are included in singing, they are here mentioned separately in order to include the notes which can by themselves be used in a performance for delight - for, they are known as antaralapa'.

Consequently, the theory of rasanispatti does include the playwrite's attempt to employ music for dramatic purposes. This is well stated by Srikantha in his Rasa-kaumudi, a work on music, in the following verse.

वक्ष्यते सप्तमे ध्याये रससन्दोहलक्षणम् ।
ते पि सर्वे स्वयं यस्मान्नाट्यसौभाग्यदीपकाः ॥

'In Ch.VII will be stated (by me) the definition of numerous rasas, since they also heighten the excellence of dramatic performance.

Again he states :-

नाट्ये गीते च काव्ये त्रिषु वसति रसः शुद्धबुद्धस्वभावः[36] ।

'rasa, pure and fully developed (in form) resides in the following three : a dramatic performance, song and poetry.'

I must not forget Bharata's important line

रस इति कः पदार्थः । उच्यते-आस्वाद्यत्वात् ।

and, therefore, would like to point out that rasa is asvadya 'to be enjoyed', i.e. asvada- visaya 'an object of enjoyment' and that it is provided to an audience by some artist(s). At this very point, I should observe that the word rasa has in language more meanings than one; it signifies an art-object

Contd..

in the first instance (as I have pointed out), a juice/ fluid (in various contexts), delight (which is the effect of an art-object) and so on. And I would caution students of Bharata about the danger of committing an error by proceeding from some preconceived and/or commentary-guided stand-point.

Therefore, before I close, I should take brief notice of certain concepts connected with the production (i.e. presentation) of rasa, which music shares in common with Poetics.

First, the word sthayin. I have already pointed out that, in any rasa, that bhava which, aided by others, developes into a rasa. So also does a certain note appear in a musical recital again and again - it being predominent. As such, the sthayi-svara is defined thus

स्थित्वा स्थित्वा प्रयोग: स्यादेकस्यैव स्वरस्य य:।
स्थायो वर्ण: स विज्ञेय:-----[37]

'That note is to be known as sthayin which is employed (in a musical recital) again and again.'

Next in importance is the word almkara. In poetics, it is a peculiar mode of speech that heightens the charm of a poetic composition in some way or other. In music also, alamkara is a peculiar employment of a note - of course, for heightening its charm.[38]

Two important aspects of rasa in Poetics are guna and dosa whose presence and absence respectively add to the beauty of poetry. In music also, it is necessary to introduce gunas and to avoid dosas. This is why Bharata explains the gunas and dosas of music in dramatic performances. Thus he states:

गुणात् प्रवर्तते गानं देषं चैव (दि स्टोटर नोटस) दोषेष्वेव निरस्यते।
तस्माद्यत्नेन विज्ञेयौ गुणदोषौ समासत:[39]।

'Song appears in a dramatic performance for Guṇa 'excellence' and with the doṣa 'fault' removed from it. As such, one should endeavour to know their nature, (at least), in brief.'

This (very brief) notice of a few words and concepts in Poetics and Music as parts of a whole system of Bharata would easily point to the later abstractions of these in later times, when the various aspects of Bharata's system differentiated themselves into full-fledged individual systems.

And now I conclude with a remark that rasa in a dramatic performance is a deliberate arrangement by a playwright of various aspects of his composition- there are certain conventions founded by him. Many of these are peculiar to different regions of India, as is seen from the names of various vṛttis ritis such as Magadhi, Gaudi, etc. These conventions are conditioners for a connoisseur. That is why certain notes and certain ragas are taken to be connected with certain rasas (so called). Nevertheless, I may observe that creative artists have defied these conventions and employed ragas conventionally connected with certain rasas, for other purposes. Thus the raga Asavari is, I learn, employed by an artist for a marching tunes[46] and Bhairavi for a song of patriotic fervour - both these ragas are generally employed for developing Karuṇa rasa.

NOTES

1. Cf. Bharata's Gitalamkara, ed. Damelon and Bhatt, Pondichery, 1959, Ch.13; Narada's Samgitamakaranda, GOS XVI, Baroda, 1920, p.5 - it refers even individual svaras to rasas, also p.19 deals with rasaprayogaviveka

Contd.

Ratnakara, ASS 35, Poona, 1987, Ch. 7 verses 1362 ff, and Subhankara's Samgitadamodara, ed. Gaurinath Shastri, Calcutta Sanskrit College Series No.XI, Calcutta, 1960 Ch.5.

2. I refer only to Bharata's Natyasastra, Vol.IV, GOS 145, Baroda, 1964, Ch.29 verses 12 ff. where he relates various jatis to different rasas - this is a matter of common knowledge.

3. Abhijnanasakuntala, with the commentary of Raghavabhatta 7th ed. Nirnaya-Sagar, Bombay 1916, pp.14.

4. I leave the word rasa untranslated for its meaning should become clear in the course of the discussion. The relevant Sutra of Bharata is : विभावानुभावव्यभिचारिसंयोगाद्रसनि
Cf. Natyasastra, with the commentary of Abhinavagupta, Vol.I, GOS XXXVI, Baroda, 1926, p.274.

5. cf. Abhijnanasakuntala, op.cit, p.12 : ग्रामरागेण ढक्कास्येन चास्य बन्ध इति ज्ञेयम्। एवं च गीतिः। तल्लक्षणं शंभो - चाञ्चत्पुटादेरुदार-स्थद्विम्पाणाविसमैमस्तगुरुसाद्वगीतिः ज्ञेयम्। तल्लक्षणं शंभो चाञ्चत्पुटादेरुदार-स्थद्विम्पज्ञेयम्।

6. cf. Brhaddesi, TSS XCIV, Trivandrum, 1928, p.49 :
अथ गीतिं प्रवक्ष्यामि छन्दोदाम + + ।
(सम्भाविता) च विज्ञेया रसमन्विता।।
पृथुलाख्या च विज्ञेया लघ्वक्षरसमन्विता।
And refer also to the preceding note.

7. cf. Abhijnanasakuntala, op.cit. pp.150-152

8. Ibid., p.150

9. Ibid., p.151 (Read : अत्र धातुसंबद्धा। न तु गीतिशब्दवाच्या।)

10. Ibid., p.152

11. Ibid.

12. Malavikagnimitra, with the commentary of Katayavema, 3rd ed., Nirnay Sagar, Bombay, 1915, p.28 :

अप्राप्तिर्विप्रलम्भः स्याद्यूनोर्जाताभिलषयोः।
विप्रलम्भस्य भेदाः स्युरयोगो विरहस्ततः ।।

13. Ibid., p.22

14. Ibid., p.23 - read the following technical details :
    मायूरो चार्धमायूरो तथा कार्मारवीति च। त्रिस्रस्तु मार्जना ज्ञेया: पुष्करेषु स्वरा-
    गान्धारो वामके कार्ये षड्जो दक्षिणपुष्करे। मध्यमश्चोर्ध्वग: मायूरी मायूर्यां
    वामके पुष्करे षड्ज ऋषभो दक्षिणे तथा। धैवतश्चोर्ध्वगो ज्ञार्धमायूर्यां स्वरौ
    निर्दिष्टौ बुधै:॥---
15. Ibid.
16. Ibid., p.24
17. Ibid., p.25
18. Ibid., p.27
19. Ibid., p.28
20. Ibid.,
21. Ibid., p.30
22. Ibid.
23. Mrcchakatika, with the commentaries of Lalla Dikshita and Prthvidhara, 2nd ed., ed. Godbole, Bombay, 1896, pp.132-33, The commentary of Lalla Dikshita supplies the following technical details :
    रक्तं सद्रागरमणीयम्। अतो मधुरं रागमाधुर्यवत्। ---स्वरसंक्रमं
    स्वराणां निषादर्षभगान्धारषड्जमध्यमधैवतपंचमानां--समीचीनं
    क्रममारोहावरोहरूपम्। --श्लिष्ट गीतादारैरभिन्नतया श्रूयमाणम्।
    ---स्वराणां संदोहो मूर्च्छना---। हेला रागस्यारोहावरोहयोरौचित्यम्।
    ललित रागेषु विरिक्तश्चारितम्।
24. Natyasastra... Vol.1, op.cit, pp.346-47-Ch.7,verses 2-3
25. Ibid., pp.350-51
26. Ibid., pp.289-91
27. Ibid., pp.291
28. Ibid., p.292 - the reference is to Vamana's Kavyalamkarasutra 1.3.30
29. Ibid.: cf.Natvasastra... Vol.2, 1934,p.220-Ch.14,verse ?
30. Natyasastra, Vol.I, op.cit, p.14-Ch.1 verse 17, Also r..
    in Svaraprakarana of Ramamatya's Svaramalakalanidhi, p..
31. Natyasastra, Vol.1, op.cit, p.90 - Ch.4 verse 19.
32. Ibid., p.265
33. Ibid., p.261
34. Ibid., p.271
35. Rasakaumudi, G.O.S., Baroda, 1963, Ch.7, verse 1
36. Ibid,, verse 2. to be cited.

37. Samgitaratnakara, op.cit., 1.6.2.

38. Ibid., 1.6.3 - read विशिष्टवर्णसंदर्भमलंकारं प्रचक्षते।

39. Natyasastra, Vol.4, op.cit, p.393 - Ch.33 verse 1. Also cf. p. 392 - Ch.32 verses 436 and 437 . The discussion of Guras and Dosas in Poetics are too well-known to be cited.

40. For a notation of this, refer to Shri H.V. Datye (the author of a Marathi book Gayani Kala), 319 shaniwar Peth, Poona-411002.

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IMAGINATION WEAVES A RHYTHMIC PATTERN OF ENERGY IN ART

PRABHAKAR PADHYE

Two distinctive features of the aesthetic that I have been advocating, were suggested to me by my intuitive experience of Indian music. One is that the mental state generated by my experience of an Indian musical recital, whatever be the rag of the recital, is not one of emotion, not even of aesthetic emotion, but is one of a heightening of 'pure' consciousness, untinged by an emotional feel.

The other feature is that this experience is rhythmical, in a distinctive sense. When I listen to a pattern of notes in the course of a Khyal recital and am captivated by it, I experience a peculiar tension which I trace to the double character of this pattern of notes. These patterns (say, tan-s) acquire a double existence -- a distinctive existence of their own and the relational existence given to them by the rag that governs them.

Not Emotion but pure consciousness:

I would like to argue that the state of mind produced by the experience of a work of art is not one of emotion but of a pure rise in the level of energy that lies at the root of consciousness. There is no such thing as 'aesthetic emotion'; what you experience is 'patterned energy'.

Elizabeth Duffy has pointed out that, as an experience, "emotion" has three distinctive features : (1) ' emotion ' represents a change in the energy level, or degree of reactivity of the individual. The excited individual has an energy level which is higher, and the depressed individual an energy level which is lower, than that which he ordinarily experiences; (2) a second characteristic of 'emotional responses' is that they are frequently, if not usually, disorganised; and (3) a third characteristic attributed to 'emotion' is that emotion involves a unique kind of sensation or quality of consciousness. (From EMOTION : Bodily change, edited by Douglas K. Candland, van Nostrand, New York, 1962.) Now the heightening of consciousness which is caused by aesthetic experience is characterized by the first and the last of these three characteristic features of emotion : there is a rise in energy level and there is a unique feel of the state of mind. But there is no disturbance or disorganization in response. In fact, there is an inward poise which is often expoeressed in a contemplative countenance. This does not mean that one goes into the trance of a yogic samadhi. One might be experiencing an excited delight, but one does feel an inward poise, an inward satisfaction of a truly contemplative character, which marks it off from an 'emotional ' state.

In neurological terms this heightning of 'pure' consciousness is connected primarily with the ' reticular formation ' of the brain and not with the 'limbic lobe' In which dwell the principal centres of emotion, operating in co-ordination with the hypothalamus.

The point, I think, is important, because the affective response has been the stock assumption of most traditional aesthetics. The only question has been regarding the nature of this emotion. Some have argued that it is like any other emotion, while others like Clive Bell have asserted that it is an emotion of a unique character. Some have regarded it as an ordinary emotion suitably transformed and purified, whereas others have considered it qualitatively different, an emotion in a class apart. I want to argue that it is not an emotion at all, but only a heightening of pure consciousness -- a rise in energy level, manifesting itself in a peculiar aesthetic poise.

<u>Rhythmic Tension</u> :

As for ' rhythm' , I must make it clear, at the outset, that this is a different kind of rhythm than the one normally mentioned in the parlance of Indian music. Rhythm is a temporal concept -- with a developmental core. In Indian music 'rhythm' or 'laya' is generally understood as the speed of recital, marking the

number of beats per time unit of performance. This is not the conception of the rhythm I am talking of. The rhythm of my conception co-exists with the standard rhythm of Indian music.

By ' rhythm ' I mean the tension created by the double existence of the parts of the artistic whole. Unlike in practical life, all parts of an artistic whole are significant. But it is different in day-to-day life. In the case of a table, for instance, the same object can serve as a writing table, a coffee-table, and something to stand on in order to fix the ceiling fan. While considering it as a writing table one is most concerned about the height and the top of the table : is the height adequate? Is the top smooth enough? In the case of the coffee-table we are mindfull again of the height and top, but in a slightly different sense: is the height comfortable enough for the posture we are adopting? Is the top good enough to keep a cup or a tray ? And when we are using the table to stand on while fixing the ceiling fan we are concerned with its height and strength : is the height adequate enough to be able to reach our hand to the fan ? All other features of the table are more or less wholly neglected. We are not really concerned with the polish and design of the table except in an extraneous sense.

The work of art, however, is a monad and no extraneous considerations are allowed. (A 'monad' is a windowless whole from which nothing can go out and into which nothing can come from outside.) All the parts of a work of art are significant and we are conscious of them all, although in different degrees. Only those parts that are related to the central core of the artistic whole stay, and those that have no such relation go out; they simply have no place in its structure. As Hugo Munsterberg long ago said, in <u>The principles of Art Education</u>, a work of art is to be viewed in isolation, in contrast to a scientific analysis which derives its significance in establishing outgoing connections. (See Melvin Rader's <u>A modern Book of Aestherics</u>, pp. 434-442.)

Now, when you think of a part of the whole, you award a kind of autonomy to it. This autonomy veries in significance in proportion to the significance of the part in the artistic whole. In appreciation of a work of art you become conscious of the autonomy of its significant parts, of a metaphor in a poem or of a colour or line in a painting, for instance. In an Indian musical recital of a <u>khyal</u> certain patterns of notes (say, <u>tan</u>-s) acquire autonomous importance.

You tend to concentrate attention on the distinctive beauty of these. But if any one of these, however excellent in itself, does not conform to the pervasive rag, it becomes immediately disturbing and is considered a blemish. The entire piece tends to be flawed because of this. This means that this pattern has a double existence. It has a beauty of its own, and it has, at the same time, an assigned place in the composite whole because of its relation to the central core. A metaphor in a poem tends to admired for its individual charm, but is frowned upon if it does not rhyme with the total spirit of the poem. A strain of colour or a line in a painting, however beautiful in itself, can spoil the entire painting.

Not all parts may characteristically participate in this double existence. But the more significant ones necessarilly do and thus acquire a double existence. They exist simultaneously in relation to themselves and in relation to the central core of the artistic whole. Your consciousness of them tends to demand a double loyalty to their local beauty and to their relation to the whole. The focal point of your consciousness is at one moment concentrated on the local beauty and the next moment on their place in the whole. This creates a kind of rhythmic tension which

constently moves your attention back and forth -- may be subconsciously but most assuredly. This rhythm has a great significance for the appreciation of a work of art.

Music is considered the purest of arts. The musical sounds have hardly any representative character. Their beauty almost wholly consists in the felt quality of sound of nada:

What applies to music applies mutatis mutandis to other arts. The experience of a work of art is that of a rhythmic pattern of energy and should be valued as such.

The Role of Imagination :

Now the question is : why does this happen ? Why is the state of mind, occasioned by the appreciation of a work of art, not one of emotion but of pure consciousness ? And why do we experience the rhythmic tension caused by a double existence ?

This is because a work of art is a pure image divorced from the normal emotions that accompany a practically significant image, and acquiring a monadic character, This pure image is the result of a characteristic attitude of art creation and of art appreciation -- the attitude of concentrating only on the imagistic side of experience, to the neglect

of its normal conceptual and emotional sides. Not that these aspects are totally neglected. Imagination uses them all, but towards building up an image.

What is this imagination which plays such a peculiar part in art?

The function of imagination in our normal perceptions is clear. There is, to begin with, a stimulus object that casts an image on your eye or ear. This image is carried by the mechanism of the central nervous system to the appropriate projection area of the brain. There it is transformed, as if by magic, into a conscious image. Imagination plays a vital role in this megical action.

Suppose you have previously seen or heard the object or similar object on numerous occasions. These previous impressions have been stored in your brain. (Prof. Wilder Penfield, in his numerous experiments, has testified to this kind of storing). The brain stores not only the physical impressions; a conception is born there of, and gets stored along with them. (Wilder Penfield has testified to this also.) Out of these numerous perceptions a standard image concept of a class of objects is formed. When the image in a new perception is cast on the brain, the imagination compares it with the stored-up image-concept and declares

that it is a table or tree or the barking of a dog, or whatever it is.

In perception imagination is tied to the stimulus object, but of the myriad image concepts stored in the brain it is obliged to call up only the one that is appropriate to the occasion. But what happens in sleep when our sense-organs lie dormant ? Our imagination does not go to sleep. It continues to be active. It rummages in the store-house of image-concepts, breaks them up if necessary, and binds them up into strange combinations which we call dreams.

Dreams testify to the essentially free character of imagination.

Imagination, which is by nature free, has, one can conclude from its dream activity, the power to isolate the individual factors in the process of perception and build around them and out of them new patterns of consciousness.

What are the factors in perception ? Perception, we must remember, is a process. Properly speaking, there is no perception; there is only perceiving.

One can conceive of well defined stages in the perceptual process. First, there is the imagistic impact on a sense organ. This is immediately, almost simultaneously, followed by conceptualization. This

The phenomenon of DREAM allows us to conceive of imagination as a free agent. Phenomenologically dreams are almost always alogical, inconsequential, unique and are forgotten within eight minutes. This means that dreams are different from the rational practical affairs of life. The imaginative power that prompts and organiezes these dreams must therefore be considered free. It has the capacity to isolate any of these links in the chain of perception-isolate any of the stages in the process of perception, view it in its purity, build around it a pattern of consciousness, using in the process whatever is available in the stored-up information : images, concepts, emotions, etc. It does not confine itself only to the imagistic aspects of the stored up information while building up an imagistic pattern, or only to conceptual aspects while building up a conceptual pattern; it tries to use all other aspects towards strengthening that particular pattern. It only tries to observe the discipline of that particular aspect; for instance, in building up conceptual patterns it sticks to the logical relations of concepts. A philosophical system is built up solely by considerations of logical viability and consistency. A work of art is to be judged solely by the quality of the imagistic pattern (of sounds or of colours, for instance) that it presents. of course,

it is an organic pattern is provided by the inter-action between the subpatterns. It is possible to strengthen the cementing force by the use of concepts and emotions. This happens primarily in literature. May be other arts (like music & dancing) make use of these ; but, I am sure, the use is marginal.

Involved in all Cultural Products :

Out of the initial imagistic factor of perception imagination creates art--of course, reinforcing it with concepts and emotions wherever necessary. Since the days of Kant imagination has been considered the primary agent in the creation of art. The formulations of Coleridge and others must be regarded as perhaps extended footnotes to the Kantian view. But I wish to argue that imagination is also at the root of the other cultural products of man. This should not be surprising : imagination, we recall, is involved in the very process of preception; and since perception is the basic function of consciousness it should follow that wherever man's consciousness is involved imagination should be at work in some guise. It we further note that one's perceptions contribute to the formation of one's persnality, we would be ready to appreciate the importance of imagination in man's doings.

If out of the sensuous imagistic factor of perception imagination begets art, out of concepts it creates science and philosophy. It uses emotion to create the world of play. The contemplation of pure energy allows it to create the speculations of higher religions. In the power of will lie the origins of ethics. Imagination does not stop here. Instead of allowing perception to dissolve in action it sometimes plays with imaginary, acts and creates plans which play such an important part in physical and social engineering. Art, science, philosophy, play, ethics, religion and plans can be related through imagination to the several individual phases of the process of perception.

I am, in other words, arguing that it is imagination which is the real creative factor in cultural efflorescence. The different aspects of human culture are related by imagination to the different aspects of the perceptual process, using on the way, in sufficient degree, the necessary aspects like image, concept, emotion, will energy and action, and drawing on whatever is useful and necessary in what is stored in the conscious, the subconscious and the unconscious of man.

The Biological Urge :

But we must remember that the products of imagination are not always had in their pristine purity. The

biological urge to live has the tendency to corrupt these products--drag them into the practical field. In fact, this biological urge has a priority over the free play of imagination. In all fields, the biological urge asserts its predominance over the tendency of the imagination to weave free patterns. In the beginning man was almost wholly a practical being -- very much like an animal. But even animals have some imagination, at least the higher animals. With the enlarged neocortex the gift of imagination in man is much bigger, and yet this imagination was first yoked to the tasks of practical life. In the beginning man was wholly pre-occupied with the business of living. First there were utensils, and only after wards man thought of beautifying them. Religion first manifested itself as magic wedded to practical aspirations. First were the rules of life in a community and only later man thought of abstract ethics. Therefore we got crafts before art, applied science before theoretical science, philosophies of life before technical philosophy, social ethics before ethics proper, physical exertions before play, and practical actions before plans. The results can be tabulated as follows :

Factors in perceptnal Process	Impure products of imagination	Pure products Imagination
Image	Craft	Art
Concept	Applied Science	Science
	Philosophy of life	Philosophy
Emotion	Physical exertion	Play
Energy	Functional Religion	Higher principle of religion
Will	Social ethics	Ethics
Action	Practical Action	Plan

In perception imagination is tied to the perceptual process which is the basic necessity of practical life. In dreams, which don't seen to be practically oriented, imagination is free. Perceptual experience is practical experience. Dream experience is normally not so. Imagination helps in the formation of practical experience, but there it is tied to a given perception. But imagination in its free play can create and treat experience for its own sake. This experience occurs independently of its theoretical or practical considerations. These

consideration flow from the conceptual aspects of perception. If perception is freed of these aspects what remains is the imagistic phase. In treating experience for its own sake imagination can therefore preoccupy itself solely with the imagistic aspect. It can break up several perceptions, isolate imagistic aspects and build out of them new images. This is artistic imagination, whose a priori principle is experience for its own sake.

The observance of this primciple turns experience into a monad which is characterized by the rhythmic tension of double existence which I have discribed above. Again the fact that experience is divorced from its theoretical aspects makes it free of emotional stress. What remains is a pure heightening of [illegible] consciousness. It is the free play of imagination which concerns itself with pure images that creates the two aspects of artistic experience with which I started this paper.

NADA IN INDIAN TRADITION

JAIDEV SINGH

The word Nada is untranslatable, for it conveys different ideas in different contexts. It has, however, a core of meaning which is esoterically common to all the usages of th word. In its essence, it means the stir or impulse of the Divine Will which manifests itself to the ear at a gross level as sound. This paper will deal with Nada in its four aspects, viz.: (1) Metaphysics of Nada, (2) Nada in Yoga, (3) Nada as described in the philosophy of Grammar, (4) Nada in Music.

1. Metaphysics of Nada

After the great cosmic night or pralaya (dissolution of a world-system), the desire of the Divine for a vision again of the lost world is associated with a sense of void. The vision of void is accompanied by an indistinct sound designated para nada or Supreme Sound which fills the entire akasa. This is the first spanda or motion. The subjective Divine Will takes an objective form as spanda or motion. And wherever there is motion, there is sound. Even Otto Karolyi in his book on Western music titled, Introducing Music, says: "The creation of the world, however it came about, must have been accompanied by motion - and therefore sound."

(p.1). Nada is of the nature of light. The Tantras believe that sound and light are phases of the same phenomenon.

The first sole expression of the Supreme will or Iccha is the origination of void or sunya and of sound and light filling this void. Nada according to the Tantras is the first stage of manifestation. In the Bible also it is said that in the beginning was the Word, the Word was with God and the Word was God. That is why Nada is generally called Nada Brahm or Sabda Brahm.

The next step is the concentration of Nada or diffuse light - sound into a focus called Bindu. "Nadatbindu - Samudvhavah." At this stage Kriya-sakti or the power of action comes into operation. The principles of creation or tattvas are evolved out of this Bindu. Bindu means point. But it is point in a totally different sense. Even mathematical point has position, though not magnitude. But Bindu has neither position, nor magnitude. It is an aspect of Sakti or divine consciousness-power. It is Sakti ready to create. It is the massive state or ghanavastha of Sakti. It is fully equipped to pass from the state of potency to that of patency. It is called Parabindu or Mahabindu to distinguish it from the other bindu-s which follow. This

para-bindu breaks into three, known as bindu, bija and nada. This bindu is that part of parabindu in which the Siva aspect is predominent. The third part of parabindu known as simply nada or apara nada (lower nada) is that in which the elements of Siva and Sakti are of equal strength. The great sound which comes into being when the para bindu breaks is known as Sabda-Brahman.

As stated above when the Divine wills to create, the initial movement towards manifestation is Nada.

Nada is really Siva-Sakti passing from the state of mere potency into that of the first ideating movement from which the whole universe is evolved.

At its highest level, Nada is known as paravaka when it is a mere Sakti of the Divine. The other three aspects from the Sabda standpoint are pasyanti, madhyama and vaikhari. Pasyanti refers to that stage of the creative movement where there is a vision of the mere outline of the whole manifestation. Madhyama is the subtle stage of the sabda, intermediate between pasyanti and vaikhari. Vaikhari is the final gross stage of the sabda when it is audible to the ear.

Physics of sound says that sound is the effect of vibration, but the Indian metaphysics of Nada says that Nada is the cause of vibration, not its effect. There can be Nada without vibration. Gross sound cannot be

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heard without a receiver like the ear and without a perceptible medium. But Nada in its essential nature is perceptible to the Divine Mind without any medium or receiver. It is the primordial causal stress, the creative energy of all manifestation. All matter - solid, liquid or gaseous-is the result of coagulation of Nada. Light, according to Indian Metaphysics, is but sound of a particular frequency. By condensation of Nada, energy becomes nuclear and thus gives rise to shapes and forms.

Indian Philosophy makes a distinction between S[illegible] (sound) and dhvani or vibration. Sabda is not language. It is the primordial causal stress formed by the desire of the Universal consciousness to be individual, of the one to be many. Para Vak or Para-sabda or para-nada is the first stirring of the Universal Consciousness. Para Vak or para nada may be called the potential energy, the second or pasyanti may be called the causal, the third or madhyama may be called the subtle, and the fourth or vaikhari may be called the gross form of Nada. As Svami Pratyagatmananda puts it, "Para Vak is the total thrill and overflow of the Basic Joy of Being and Becoming" (Japasutram, p.44).

Commonly it is believed that this fourfold division of Nada or Sabda into Para, Pasyanti, Madhyama and

Vaikhari is Tantrika, not Vaidika. But this is a mistaken idea. We find a clear mention of Vak into four divisions in the Rgveda 1, 164; 45.

चत्वारि वाक् परिमिता पदानि तानि विदुर्ब्राह्मणा ये मनीषिणः ।
गुहा त्रीणि निहिता नेंगयन्ति तुरीयं वाचो मनुष्या वदन्ति ।।

"Vak in its entirety is measured out in four steps. These steps the Brahmana-s who know the Veda and have understanding know. Three of the four divisions of steps, established in the secrecy, are not manifested. Men speak the fourth step of the speech in their dealings."

Sayana in his commentary on this Rk after discussing various theories regarding the four steps of Vak says that these are, as the Tantrika-s maintain, para, pasyanti, madhyama and vaikhari.

The Tantra-s give a detailed description of the manifestation of the Universe or creation from Para Vak. Space will not permit a description of the creative process in this paper. Para Vak, Para Samvid, Para Sakti are synonymous. From this Sakti appear Sada Siva, Iswara, Sadvidya, Maya with her five Kancuka-s, Purusa-Prakrti, followed by Buddhi, Ahamkara, Manas, five tanmatra-s, five jnanendriya-s or five sense-functions and five karmendriya-s or five active functions and organs of action and five mahabhuta-s or gross elements.

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2. Nada in Yoga

We shall now try to understand the part played by Nada in Yoga. First of all, we shall try to understand the function of Nada as mantra.

We have seen that the great sound which comes into being when para bindu splits is known as Sabda brahman. According to Raghava Bhatta, the commentator on Sarada-tilaka, Sabda-brahman is the caitanya in all beings. This caitanya sakti exists in the individual bodies in the form of Kundalini. Nada is the first Stage in the production of Mantra. The second is Bindu or Sabda-brahman; the third is Tribindu i.e. Bindu, Nada and Bija or Kamakala; the fourth is the stage of Matrkas which are the subtle state of the manifested gross letters. The last stage is the gross letters or sthulasabda.

We have seen that bija is sakti, and bindu is Siva, and apara nada or lower nada is the product of their union. Bija is practically the entire alphabet, the letters of which are arranged in a triangular way in the Tantras. They form an a - ka - tha triangle. The three lines of this triangle are formed of sixteen letters each, beginning with 'a' 'ka' and 'tha'.

The nada which arises from the interaction of apara bindu and bija has to be distinguished from Sabda-brahman

or mahanada which comes into being after the division of para-bindu. This sabda-brahman or mahanada contains within itself the indistinct sound of all the letters of the alphabet. Sabda brahman is represented by Kundalini in the body of a man and serves as a mechanism for the articulation of sound.

In the human body, Para vak is in the Muladhara-Cakra, Pasyanti in Svadhisthana and upwards, Madhyama in Anahata and upwards and Vaikhari in the throat. In Kundalini, sakti is subtle (Suksma) and in the form of light and not an object of hearing. When she goes upward, she becomes Pasyanti in the susumna nadi. When she reaches the heart-lotus or Anahata Cakra, she becomes Madhyama and assumes the form of Nada in a subtle form. Appearing in the throat and vocal organs, she becomes Vaikhari, assumes the form of all letters and becomes audible.

The word Mantra is composed of the root 'man' meaning 'to ponder' and the suffix 'tra' meaning 'to protect'. Mananat travate iti mantrah - Mantra is that composite of letters which when pondered over and repeated protects the Sadhaka or the aspirant. It has been rightly defined by Sir John Woodroffe as "power in the form of idea clothed with sound." A Mantra is not simply sound, nor simply word or the

meaning of that word. It is the Devata infused in words. At first, the Devata exists for the Sadhaka as an audible sound. By Mantra-Sadhana, he realizes that Devata, that is to say, he realizes that as a form of Power or Sakti of which word and sound are a faint-reflection. The Sadhaka has to realize the Power of which the word is only a vehicle. He can do this by the Mantra-Sakti and Japa-Sakti or ardent mental repetition of the Mantra.

Mantra-Sastra believes that there is 'natural name' of objects and processes. Human language consists of artificial, conventional words. Natural name is that sound which denotes a particular object in the creative process of Nada. For instance in Mantra-sastra, Ram (रं) is the natural name of fire. So also Krim, Hrim etc. which appear to us entirely senseless gibberish are the natural names of physical or mental phenomena. These are Bija-Mantra-s. The Bija-s indicate the Devata which they are. Aum (Om) is considered to be the greatest Mantra. It is at the human or Vaikhari level an imitation of the Nada or creative process of the Divine mind.

It has been rightly said that Mantra and Devata are one and the same. The presence of the Devata is

invoked by Japa or repetition of the Mantra. Japa has three aspects, viz., sound, rhythm, and content. When sound and rhythm are properly maintained in Japa, the content or meaning is automatically revealed to the mind, for sound and sense, vak and artha are inseparably connected.

Mantra has to be imparted by a Guru who is thoroughly charged with Power. Such Mantra churns our whole being. Japa brings about bhuta-suddhi or purification of our physical and mental make-up. Finally*, Japa ends in silence which is the moment of Self-realization.

We have briefly considered the function of Nada as mantra. We shall now consider the function of Nada in a special Yoga, known as Nadanusandhana Yoga. This is briefly described in Yoga-Taravali which is ascribed to Sankara and in detail in Nada-vindupanisat and Hatha-Yoga-pradipika. I shall here give a gist of the Yoga as described in Hatha-Yoga-pradipika.

By pranayama, sambhavi-mudra etc. when prana becomes steady, anahata nada i.e. unstruck sound or sound without any impact is audible in the Susumna nadi. One should continue listening to it attentively with the right ear. At first when the anahata cakra near the heart is pierced, the Yogi hears gross anahata sound. This is the first phase or arambhavastha.

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* For further comments on this see the Marathi essay by Sri Vaman Maharaj Gulavani included here.

The second phase is known as ghata. When prana vayu and apana vayu mingle together and become one, the Visuddhi Cakra near the throat is crossed, and one hears subtle sound. When the Yogi goes on listening to it, his mind is absorbed in it, and he loses interest in any external phenomenon. He experiences great delight in listening to this sound. His mind is, therefore, deeply concentrated on it.

The third phase is known as paricaya. Here the prana enters the void or akasa in the ajnacakra between the two eye-brows. The sadhaka hears a sound like that of mardala drum and his mind is deeply absorbed in it. Here he experiences Sahajananda or the natural bliss which can be experienced only by resting in the Self.

The fourth phase is known as Nispatti. In this, the prana enters the brahmarandhra or the void over the crown of the head. The Sadhaka now hears sweet anahata nada like that of flute or vina. The mind is now completely absorbed. It undergoes mutation; it loses its character of sankalpa and vikalpa i.e. grasping phenomena in parts and singling out one of them. After this, manas enters the unmani avastha. The partial view of the Sadhaka is gone. He now sees life steadily and sees it whole. The Jiva or Soul has now communion with the Supreme Self.

..11.

Nada in the Philosophy of Grammar

The most authoritative book on this subject is Bhartrhari's, Vakyapadiya. The grammatical aspect of the subject is beyond the scope of this paper. I shall, therefore, give only a brief description of its philosophical aspect. Philosophy of Grammar uses the word Sabda or nada in its highest sense as synonyms. The very first verse of Canto I of Vakyapadiya says:

अनादिनिधनं ब्रह्म शब्दतत्त्वं यदक्षरम् ।
विवर्ततेऽर्थभावेन प्रक्रिया जगतो यतः ॥

The words of this verse have double entendre. So it is difficult to translate it into English. It may be translated as follows:

"The imperishable Brahman is beginningless and endless. Its essential nature is Sabda which unfolds itself into various objects and which brings about the creation of the Universe."

It is clear, therefore, that according to Bhartrhari Sabda or Nada is the essential nature of Brahman. The origin of the Universe can be traced to Sabda or Nada which unfolds itself into various objects of creation. There is a double entrendra in the words Sabda, artha and prakriya. Sabda means both sound and word. Artha

means both object and meaning. Prakriya means both production and creation and also rules for the formation and inflection of words.

It is clear that the standpoint of Bhartrhari and the non-dualistic Saiva Agama is the same inasmuchas both believe that the essential sakti of the Divine can be described by Nada which is creative Energy of which sound is the most manifest example at the physical level. The only difference between the two is that Saiva Agama believes in four levels of Nada, viz., Para, Pasyanti, Madhyama and Vaikhari. The other difference is that Saiva Agama believes that it is Vimarsa Sakti or the self-consciousness of the Divine which brings about manifestation, but the grammarian says that it is Kala-Sakti.

Sabda, according to both, is metempirical, the prices and underlying principle of all phenomena. Sabda or Nada is the light of all lights.

The most important contribution made by the Philosophy of Grammar is the theory of sphota which alone is germane to the scope of this paper. The theory of sphota maintains that a word or sentence should not be considered simply as a concatenation of different sound units, but as a single, integral meaning bearing symbol. The word or sentence thus considered

as a single meaning - bearing symbol is called sphota. Sphota is indivisible and has no time-order; the articulated sounds with the time-order are only a means of revealing the symbol. The word sphota is derived from the root 'sphuta' which means 'to burst', 'to appear in a flash'. As Nagesabhatta puts it *"Sphutati prakasate's rthosmad iti sphotah; vacaka iti yavat" (Sphotavada,p.5) "That from which meaning bursts forth in a flash is sphota; in other words, it is the vacaka or meaningful symbol." It may be considered as a linguistic sign in its aspect of bearing meaning, and as an entity manifested by letters.

According to Bhartrhari, speech and thought or speech and meaning are but two aspects of one and the same principle.

"एकस्यैवात्मनो भेदो शब्दार्थवपृथक्स्थितौ"।

(V.P.11, 31) "Speech and meaning are aspects of one and the same fact; they stand as non-distinct and inseparable."

Janus-like, words have two faces - dhvani and artha, the former is the prakrta dhavani, the external face of the symbol, the latter is the semantic or internal face, directly bearing the meaning or sphota, the integral linguistic symbol. Bhartrhari says:

..14.

नादैराहितबीजायामन्त्येन ध्वनिना सह ।
आवृत्तपरिपाकायां बुद्धौ शब्दोऽवधार्यते ।। (VP 1,84

"The word is grasped in the final cognition, the impressions of which have been left by the sounds including the final one and which has gradually attained maturity."

The sounds of the letters which form the word are only manifesting agencies; they only help to reveal the word - symbol or sphota. Each succeeding sound carries forward the samskara or engram of the previous sound until in the final sound the totality of all the sounds reveals the word-symbol or sphota. The sphota is not an arithmetical sum of the sounds of the letters of the word. It is, in terms of modern psychology a Gestalt. It is clear that Abhinavagupta made full use of this in his description of the relation of Sruti to Svara.

Nada in Music

Turn we now to Nada as dealt with in books on Music. Sarangdeva, the author of Samgita-ratnakara, first of all uses the word Nada in its highest sense as the consciousness-power of the Divine which unfolds itself as the phenomenal world.

..15.

चैतन्यं सर्वभूतानां विवृतं जगदात्मना ।
नादब्रह्म तदानन्दमद्वितीयमुपास्महे ।। (Vol.1, p.62)

We worship the Nada-Brahman which is the life and consciousness in all creatures, which appears in the form of the world, which is bliss par excellence and which is non-dual.

Kallinatha in his commentary says that this Nada is the para vak sakti of Brahman "परावाक्ययस्य ब्रह्मशक्तेर्न-दिस्थ ब्रह्मणोऽत्यन्तप्रत्यासन्नत्वात्तदुपासनायां कृतायां ब्रह्मप्राप्तिर्मणि-प्रभाव्रवृत्तस्य मणिलाभवद्भवेदिति ।

(p.63). "Nada is the Sakti of Brahman, synonymous with paravak. By worshipping the sakti of Brahman which is closely related to Brahman, we can attain to Brahman itself, just as a man moved by the lustre of a gem attains the gem itself."

The word Nada has been used in three senses in our musical literature, viz., (1) in the sense of Supreme Nada, the sakti of the Divine (2) Sound in general (3) musical sound. This has caused confusion of stand-points in places. For instance, Sarngadeva pays homage to Nada Brahman in which he uses the word Nada in its ultimate, Supreme sense. Then he calls Siva Nada-tanu in which he uses the word Nada in the sense of musical

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sound. All books on Music say that _Nada_ is of two kinds, viz., _ahata_ - that which is due to an impact, and _anahata_ - that which is not due to any impact, which is _sui generis_ or spontaneous, and then they maintain that _Siva_ is _Nada-tanu_ in the musical sense. If _ahata nada_ alone is musical, surely _Siva_ cannot be called _Nada-tanu_ in the sense of _ahata nada_.

Again, the first verse of the second chapter of _Samgita - ratnakara_ (Vol. 1) says that _gita_ or song and _vadya_ or musical instrument is of the nature of _nada_, meaning by _nada_, musical sound. Then the second verse says that a letter owes its expression to _nada_, a word is composed of letters, speech is made up of words, all dealings in the world are carried on by speech; hence the entire world depends on _nada_. As the second verse comes closely on the heels of the first verse, and in the first verse the word _nada_ has been used in the sense of musical sound, Sarngadeva, in order to praise the pre-eminence and glory of music, seems to suggest that the entire world depends on _nada_ in the sense of musical sound. Undoubtedly the entire world depends on _nada_ in the sense of divine power which causes movements, but it cannot be said that the entire world depends on _nada_ in the sense of musical

sound as we know it. As the same word <u>nada</u> is used for divine <u>sakti</u>, speech-sound and musical sound, writers on Music, in their enthusiasm to laud music, have tried to suggest that the entire world depends on music as its primary cause. They have exploited the word <u>nada</u> in order to glorify music. Surely the divine <u>sakti</u> is not <u>ahata nada</u> which alone is earthly music. <u>Nada</u> in its ultimate sense may be musical in a higher sense, may be harmonious, but we cannot say that it is the music of <u>ahata nada</u>.

Our musical literature accounts for the production of <u>nada</u> in the following way. In this context, the word <u>nada</u> is used in the wide sense of sound-musical or non-musical. Sarngadeva says that when <u>Atman</u> desires to express, it moves the <u>vayu</u>. The <u>vayu</u> which resides in <u>brahm-granthi</u> gradually moves upward and through impact in the navel, heart, throat, head, mouth etc. expresses sound (<u>āvirbhavayati dhvanim</u>). It is difficult to say what in this context is meant by 'fire'. Probably, it means nerve-energy. <u>Vayu</u> obviously is air which is the medium of sound. Again it is difficult to say what exactly is meant by <u>brahm-granthi</u> here. Both the commentators Kallinatha and <u>Simhabhupala</u> are silent on this point. In <u>Hathayoga-pradipika</u>, this word occurs in verse 70 of the fourth

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chapter. There Brahmananda, the commentator, explains it as anahata cakra or the cakra near the heart.

After this Sarngadeva classifies nada into five kinds - atisuksma, suksma, pusta, apusta, and krtrima. Simhabhupala says that in other works pusta and apusta nada have been designated as vyakta and avyakta. He quotes two verses from Matanga's Brhaddesi which says that atisuksma nada resides in the heart, suksma nada resides in guha or cave, pusta or vyakta nada is perceived in the throat, avyakta or apusta nada is in the palate and krtrima nada is in the mouth.

The etymology of the word nada is given by Sarngadeva as follows:

त[illegible] नकारं प्राणनामानं दकारमनलं विदुः ।

जातः प्राणाग्नि संयोगात्तेन नादोऽभिधीयते।। I.3,6

Na of Nada indicates prana, and its da indicates fire. It is called Nada because it is born of the contact of prana with fire. It looks somewhat fantastic on the face of it. But Kallinatha hastens to add in his commentary that na and da are not to be taken as letters or words of the ordinary spe ch. They are to be taken as the bijaksara-s or natural names of mantra-sastra. That prana and heat are concerned in the production of sound may be justified by the fact that

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sound is due to vibration, that vibration means motion and that where there is motion, there is heat.

After this Śarngadeva proceeds to describe nada in the sense of musical sound. He says that there can be twenty-two perceivable sounds known as sruti-s and gives a practical demonstration of these sruti-s. The question of sruti-s is beyond the scope of this paper. Sruti-s are only the series of sounds that reveal a svara or musical note which is used in practical music. So we shall take up the question of the exposition of svara according to the standpoint of Indian Music.

Sarngadeva gives the following definition of svara

श्रुत्यनन्तरभावी यः स्निग्धो नुरणनात्मकः ।
स्वतो रंजयति श्रोतृचित्तं स स्वर उच्यते ।। I.3, 24

What is revealed immediately after sruti, what is smooth and pleasant, what is of the nature of continuous tinkling echo, what in and by itself gives aesthetic joy to the mind of the listener is svara or a musical note.

In this definition, there are four important elements, viz., (1) श्रुत्यनन्तरभावी (2) स्निग्ध (3) अनुरणनात्मक , (4) स्वतो रञ्जयति श्रोतृचित्तम्
These have to be considered carefully. Of these four elements, two, viz., श्रुत्यनन्तरभावी and अनुरणनात्मक

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are objective and two, viz. स्निग्ध and स्वतोरञ्जयति are subjective criteria of svara or musical sound.

First of all, we shall take up श्रुत्यनन्तरभावी. Kallinatha explains it thus :

"श्रुतेश्चतुर्थ्यादेर्मारुताघाताद्युत्पन्न-प्रथमध्वनेरनन्तरं भाव्याविर्भवनशील:"

i.e. svara is that which is revealed immediately after the first sound produced by the impact of air etc. at the fourth and other sruti-s. This raises the question of the relationship between the sruti-s and svara. Matanga gives five theories of this relationship, viz., (1) tadatmya or identity between the sruti-s and svara (2) vivarta i.e. reflection or different condition or state (3) karya or effect, (4) parinama or transformation, (5) abhivyakti or revelation. Of these, Matanga rejects the first three and accepts the last two, viz., parinama and abhivyakti.

I feel, however, that parinama and abhivyakti are not the same, and both cannot be accepted as equally true. To me, it appears that abhivyakti or vyanjaka-vyangyabhava best describes the relationship between the sruti-s and svara. The sruti-s are not the svara; they only help to reveal the svara, the relationship between the sruti-s and svara is that of the manifestor and manifested. To me, it appears that there is close parallelism in relationship between varna-s and sabda

or word-symbol or sphota and that between sruti-s and svara. Just as in the case of sabda, the sounds of the preceding letters together with the sound of the final letter, combine to reveal the word-symbol or sphota, even so the impressions or engrams of the preceding sruti-s roll forward and on the occasion of the final sruti burst forth in a flash into a svara. This svara is like a sphota, but there is one important difference. Whereas, a sphota has an object external or internal as a referent, the svara has no referent outside itself. It is its own referent. Just as the sphota is not an arithmetical sum of the sounds of the preceding varna-s, but a Gestalt in its own right, even so the svara is not an arithmetical sum of the preceding sruti-s; the sruti-s are only manifesting agencies that reveal the svara which is a Gestalt ab initio.

The second objective criterion is that svara is अनुरणनात्मक i.e. svara is of the nature of continuous tinkling echo. Western science says that sounds of regular vibration are musical. It seems to me that anurana includes the idea of continuity and regular vibration.

As has already been said, स्निग्ध and स्वतो रञ्जयति are the subjective criteria of musical sound. Snigdha

means smooth and pleasant. स्वतोरञ्जयति means which gives aesthetic joy in and by itself, which does not require any further means for producing aesthic joy, which, in other words, is an aesthetic gestalt.

Let us compare the definition of Sarngadeva with that given by Alexander Wood in his, The Physics of Music. "Musical sounds are those which are smooth, regular, pleasant and of definite pitch." The idea of 'smooth' in the above definition is contained in the word snigdha of Sarngadeva. The idea of 'regular' is contained in the word anurananatmakah. The idea of 'pleasant' is contained in ranjayati. The main idea, therefore, of modern physics in the definition of acoustically musical sound are already present in the Indian concept of svara. The Indian authors, however, contribute two new elements to the science of musical sound, viz., श्रुत्यनन्तरभावी which maintains that a musical sound is not merely a resultant of the component vibrations, but an emergent, acoustically a new and unique phenomenon. The vibrations only reveal it. Secondly, the musical sound is a complete harmonious whole in an by itself and does not require any further aid for its pleasantness.

MUSIC AND SOUND IN YOGA

Vimala Musalagaonkar

Yoga is a great gift of India to the world. The yogi, by making the human body itself a laboratory and workshop and by countrolling the mind, (Cittavrtti-nirodha) realised many truths among which those concerning Nada and Sangeeta are of great importance. The facts established by science were known to the Indian yogi centuries ago and were, in fact, means of self-realisation and attaining jeewan-mukti. For instance, the fact that various forms of energy are interconvertible and that light travels faster than sound were known to the yogi-s.

Thw word ' Sound ' used in the context of yoga has been taken here to correspond to Nada. The line of thought of an age always finds expression through words. What is understood as Sphota in grammar, Dhvani in poetics, is called Nada in Yoga and the word Nada has given an impetus and new vistas to expression. According to the literal meaning of the topic, this paper should be devoted to the question as to what is the place of ' Music and Sound ' in yoga. We shall see during the course of this paper how music has come to be discussed under yoga in various contexts. All the same, it has to be pointed out that Indian thought has

unfolded itself more in relation to 'Yoga in Music' than to 'Music in Yoga.' Hence it will be our endeavour in this paper to bring out the close relation between yoga and music from both these points of view. Thus the treatment will not be a partial one and this liberty has been taken in the interest of an integral approach and outlook.

The word 'Yoga' has different connotations such as acquisition, union, meditation, a trick or contrivance, physical fitness, practical use, Viskambha etc, of astrology, remedy, treachery, wealth, substance, a means to an end, armour, action of mantra and diligence.

योगो पूवर्थिसम्प्राप्तौ संगति-ध्यान-युक्तिषु ।
वपु:स्थैर्य-प्रयोगे च विष्कम्भादिषु भेषजे ।।
विश्रब्धघातिनि द्रव्योपायसंनहनेष्वपि ।
कार्मणो पि च योग: स्यात्--------।।   कोषकार

The word 'Yoga' is derived from the root ' Yuj ' - Yujir ' with the suffix '   ' . Panini in his ' 'Ganapatha' has included yuj in three Ganas viz.

(1) as root 'yuj' in Divadigana, meaning profound meditation.

(2) as root ' yuji ' in Rudhadigana, meaning combination.

(3) as root ' yuj ' in Curadigana, meaning self - control.

A union of two separate objects is yoga e.g. Ravi-Chandra-yoga. Here the word yoga is in the sense of becoming ' One '. The fulfilment of a want would also be in a way yoga e,g. the acquisition of wealth also does imply combination. Thus in both technical and general usage yoga primarily means a Union. In mathematics also this word has been used in the sense of addition. Yoga has conventionally come to be associated with that school of Darsana ((Philosophy) which concerns itself with a union of the individual and the universal consciousness. The scriptures have called it a power which joins the ' Jivatman ' with the ' Paramatman'.

The sage Hiranyagarbha is regarded as the first teacher of yoga, .The statement, हिरण्यगर्भो योगस्य बक्ता ना न्यः पुरातनः ।। in Yajnyavalkya Smriti bears testimony to this. But the earliest available authentic work on yoga is that of sage Patanjali. In it we do not find an elaborate treatment of the subject but only a general survey. The Upanisads mention four branches of yoga. They are Mantra-yoga, Laya-yoga, Hatha-yoga and Raja-yoga.

योगो हि बहुधा ब्रह्मन् भिद्यते व्यवहारतः ।
मन्त्रयोगो लयश्चैव हठो सौ राजयोगकः ।। यो.त.उ.१६।३६७

But in general, by yoga one understands Hatha-yoga only, since Raja-yoga has its foundation in Hatha-yoga, and Laya-Yoga and Mantra-yoga also merge in Hatha-yoga, which forms the basis of this paper. Moreover, Hatha-yoga is directly concerned with the human body as such whereas Raja-Yoga begins at the level of the mind. The human body as a microcosm of the universe has not been visualised as such in Raja-yoga so completely and vividly as in Hatha-yoga.

Music is also directly concerned with the body from which it emanates. Bharata has expressed the same idea by talking of the human body as 'Sariri Vina'. Svara-s are produced primarily by the body and secondarily by the Tata, Susira, Avanaddha and Ghana instruments. The following verses of Bharata's Natya-Sastra state very clearly that svara-s are originally manifestated in the human body.

> शारीयमिव वीणायां स्वरा: सप्तप्रकीर्तिता: ।
> तेभ्यो विनि:सृताश्चैवमातोद्येषु द्विजोत्तमा: ।।३०।।
> पूर्वं शरीरादुद्भूतास्ततो गच्छन्ति दारवीम् ।
> तत: पुष्करजं चैवमनुयान्ति घनं(ध्वनिं)पुन:(युता:)।।३१।।

ना०शा० अ० ३४।८१०

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Yogi-s, making the human body a laboratory for spritual sadhana, tried to locate the seat of Intelligence in the body. As a result of this effort they experienced unknown truths and communicated their insight to society for the elevation of life. Among their gifts to society are Nada and Sangita. From their deep spiritual experience yogi-s gave a subtle and comprehensive description of the nature and power of the Nada-tattava. The complete knowledge of things is possible only through direct perception. During the practice of yoga, the yogi while piercing through Cakra-s (Cakra-Bhedana) and awekening of Kundalini,* perceived the subtle principle embracing the concepts of sabda, dhavani and sphota in its concretness (Colour, form, shape etc.) and gave it the name Nada.

Yogi-s were aware of the truth that Nada (sound) is the beacon and the unobstructed element which illuminates the

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* In tantric texts, but for Vamakeswara Tantra, the vowels of language are described on this Cakra-,Some, Lalana and Hanascakra are in the middle of the eye-brows and are mentioned casually in some texts and are suposed to be the allies of the 'Brahma-Randhra! On these is the location of Panca-Tan-Mantra-s and it is said to be the place of Manomava-Kosa. In all the texts,whatever the yogi-s have said is based on their vision in their personal & practical experience.There

path of spiritual realisation in a more powerful way than light and hence they adopted it as their only guiding principle on the narrow rough, slippery and unknown path of spiritual sadhana*. According to the Hathayogapradipika :-

सर्वचिन्ता परित्यूज्य सावधानेन चेतसा ।
नाद एवानुसंधेयो योगसाम्राज्यमिच्छता ।। ८६, १७२

Nada - bindupanisad speaks of the power of Nada for discipline of the mind

मकरन्द पिबन्भृंगो गन्धान् नापेक्षते यथ: ।
नादासक्तं सदाचितं विषयं नहि कांक्षते ।।४२।।

बद्ध: सुनादगन्धेय सद्य: संत्यक्त चापलम् ।
नादग्रहणातश्चित्तमन्तरंग - भुजंगमम् ।। ४३ ।।

विस्मृत्य विश्वमेकाग्रं कुत्रचिन्नहि धावति ।
मनोन्मत्तगजेन्द्रस्य विषयोद्यान - चारिण: ।।४४।।

नियामन समर्थो यं निनादो निशितांकुश: ।
नादो न्तरंग: सारंगबन्धने वागुरायते ।।४५।।

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अन्तरंगस्य यमिनो वाजिन: परिघायते ।
नादोपास्तिरतो नित्यमवधार्या हि योगिना।।६५।।

ह०यो०प्र०पृ० १७३

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*...is no difference of opinion regarding sid Cakra-s . No text speaks of a lesser number of cakra-s but some speak of one, two or three or even more cakra-s over and above six.

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The mind which loses itself in Nada does not get distracted by other things, but remains stable. The worship of Nada is a very powerful means of disciplining the mind, just like the reins to a horse. Upanisads describe the extra - ordinary power of Nada by means of various similies e.g. the detachment of the yogi is compared to a bee, his self-absorption to a serpent and his self-abandonment to a deer and so on.

In the Yoga - sikhopanisad there is a description of the nature and process of the manifestation of 'Nada'.

अक्षरं परयो नाद: शब्दब्रह्नेति कथ्यते ।
मूलाधारगता शक्ति: स्वधारा बिन्दुरूपिणी ।।२।।

तस्यामुत्पद्यते नाद: सूक्ष्मबोजादिवांकुर: ।
तां पश्यन्तो विदुर्विश्वं यथा पश्यन्ति योगिन: ।।३।।

The Icchasakti (willpower) of Parabrahman is called Brahma Nada'. That is also known as Avinasi, (Immortal) or Indestructible Sabdabrahman. Nada arises from Muladhara, where it is in its unmanifested Bindu from ; the same is known as Pasyanti. The Yogi-s 'see' the universe with that. "There is no Mantra greater than Nada", says the Yogasikhopanisad. In the description of the process of the manifestation of Nada, the seed of Nada has been called Pasyanti Vak and this statement indicates the visual power of Nada.

..7..

Sound, light and motion all are manifestations of energy. Thus light and sound are visual and aural manifestations of heat. It has been said in Sangita-Ratnakara :- जातः प्राणाग्नि संयोगादेन नादो भिधीयते (सं०र०१-३।६।६४)
The motion of Nada has its visual as well as aural form. Heat, Sound and motion are dependent on one another. Motion is necessary for sound and motion results in light as well. The Dhyana-bindupanisad supports this by saying:

ज्योतिर्मयः शिवः । अथवा ( ) ज्योतिर्मयः शिवो नादः ।

The purpose of Nada in yoga is to attain Paramapada or Videha Kaivalya. The Yogi-s have used the eternal flow of Nada in three ways :-1. The luminant quality of Nada enabled the yogi-s to realise many hidden truths in the body and thereby confirm and explain the relevant sayings in Veda-s as for example Atharvavada calls the human body an abode of gods:

अष्टाचक्रा नवद्वारा देवानां पुरयोध्या
तस्यां हिरण्मयः कोशः स्वर्गो ज्योतिषावृतः। (अथर्ववेद १०-२-३१)

Patanjali has said in Yogasutra:

प्रकाशक्रियास्थितिशील भूतेन्द्रियात्मकं भोगापवगार्थं दृश्यम्। (योगसूत्र २।१८)

Further, Nada enables one to perceive the power of Kundalini, the six Cakra-s, the five Kosa-s (sheaths), their location, function and mutual relations, the colours,

power and function of the five primary elements and through its worship has a specialised knowledge of interllect (Buddhi), meditation (Dhyana) and retentive memory (Dharana) etc. Through Nada he gets to know the nature of Nirvicara Samadni and Asamprajnata Samadhi.

2. Nada has been used as the means of attaining the path to liberation.

मूलाधारात्सुषुम्ना च बिसतन्तुनिभा शुभा ॥१०१॥

अमूर्तौ वर्तते नादो वीणादण्डसमुत्थित: ।
शंखनादादिभिश्चैव मध्यमेव ध्वनिर्यथा ॥१०२॥

व्योमरन्ध्रगतो नादो मायूरं नादमेव च ।
कपाल-कुहरे मध्ये चतुर्द्वारस्य मध्यमे ॥१०३॥

घण्टादि नादसक्तस्तब्धान्त:करणा हरिणास्य।
प्रहरणमपि सुकरं स्याच्छरसंधान-प्रवीणश्चेत्॥

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3. Nada has also been used as a symbol. The Nada which Yogi hears during the various stages of spiritual elevation has been identified in Sangita in the context of the region (Desa) time (Kala) and individual (Patra) and for communicating that context those symbols were used which were native to the speaker and listener. The Indian yogi speaks of the sound of bells, conches, drums etc. When he communicates his experience of 'sound' to his people, One

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can imagine a western Yogi talking of instruments of his region to communicate his experience of 'sound' to his people,

The Nadabindupnisad describes the sequence of sounds, a yogi hears sitting in the Siddhasana posture, in the Vaisnavi Mudra, in an introvert state.

सिद्धासनस्थितो योगी मुद्रां संधाय वैष्णवीम् ।
श्रूयते प्रथमाभ्यासे नादो नानाविधो महान् ।।३२।।

आदौ जलधि जीमूत भेरी निर्झर संभव: ।
मध्ये मर्दलशव्दाभो घण्टा काहलजस्तथा।।३४।।

अन्ते तु किंकणी-वंश-वीणा भ्रमण निस्वन:।
नानाविधा नादा: श्रूयन्ते सूक्ष्म सूक्ष्मत: ।।३५।।

तत्र सूक्ष्म सूक्ष्मतरं नादमेव परामृशेत ।
यत्र कुत्रापि का नादे लगति प्रथमं मन: ।।३७

तत्र तत्र स्थिरी भूत्वा तेन सार्धं विलीयते ।
नादमेवानुसंदध्यान्नादे चित्तं विलीयते ।।४१।।

नादबिन्दूपनिषद् पृ.२२१-२२२

Yogasikhopanisad also given an idea of the sound heard within the body.

हृदये व्यज्यते घोषो गर्जत्पर्जन्यसंनिभ: ।

तत्र स्थिता सुरेशान मध्यमेत्यभिधीयते ।
प्राणेन च स्वराख्येत प्रथिता वैखरी पुन:।। यो श०उ० ३।४

During the initial stages the yogi hears deep, loud and intense sounds. Gradually he begins to hear subtler sounds. The roar of the sea, the rumbling of the clouds,

the beating of the drums and the sound of the water-fall : these are the sounds heard in the first stage.

During creation when ' Intelligence ' descended, it came in contact with the 'gross' (Sthula). In this process though it gained variety or diversity yet it gradually lost the 'Rasa' or 'Ananda' aspect. In the 'roar' of the sea or the rumbling of clouds we do not percieve any Specific tonality. In 'Bheri'- there is the manifestation of one note. The sound of a waterfall is more pleasing to hear than the other sounds. Thus one sees an ascending order (Arohi-Krama) in these sounds i.e. the order of involution in creation. In the order of evolution i.e. in the gradual embodiment of the subtle in the gross, one sees a descending order or Avarohi Krama. In the process of the realisation of the yogi, the ascending order of perception from 'gross' to ' subtle ' is perceptible.

The Yogi then hears subtler sounds in the order of the mardala, the bell and then the flute. In this too, from the point of view of tonality the order is again from the gross to the subtle, the journey is from 'one' to many, from mono-tone to multi-tone.

In the last stage of meditation the sounds he hears are in the order of kinkini (ghana vadya),

vansi (susira) vina (tata) and the buzzing of the bee. A question may arise here as to why, then the symbol used for the last sound is the buzzing of the bee, the symbols used for the preceding ones also should have not been bird-calls and animal cries instead of musical instruments. It may also be due to the high frequency of the bee's bu33. Treatises on music do recognise the seven notes in the cries and calls of various birds and animals.

मयूर चातकच्छाग कौंचकोकिलदुर्दुरा: ।।४६।।
गजेश्च सप्त षड्षादोन्क्रमादुच्चारय-.त्यमो।
स० र० ल० १-३,४६-४७।६१

It is possible that the pleasantness, sweetness and variety of sounds heard in the body are better expressed through sounds produced by instruments. The svara-s may incidentally be recognised in the cries of birds but they are demonstrated best with the help of instruments.

In this context some points deserve to be mentioned.

1. In the human body the order of sounds heard is in the ascending order of the tonal manifestation i.e. from ' One ' to 'many' and from 'gross' to 'subtle'.

2. The svara-s were first produced in the 'gatra vina (vocal vina) and later played on the 'DaraviVina (wooden vina).

पूर्व शरोराद्दुद्भूतास्ततो गच्छन्ति दारवोम् ।
तत: पुष्करज चैवमनुयान्ति घनं(क्वि)पुन:(युता:)।।
ना०शा० ४।३१।४२०

3. The concept of locating the position of gods and goddesses in the human body has been extended to the daravi vina (wooden vina) in sangita. Moreover, the cries of any creature can only be audible; there is no visibility associated with their process of manifestation, as is the case with musical instruments. That is why, our yogi-s preferred to communicate their experience of inner sounds through identification with musical instruments. In Sangita Ratnakara, it has been said:-

> दण्ड: शंभुरुमातन्त्री कुकुभ: कमलापति: ।
> इन्दिरा पत्रिका ब्रह्मा तुम्बं नाभि: सरस्वती ।।५५।।
>
> दोरको वासुकिर्जीवा सुधांशु: सारिका रवि: ।
> सर्वदेवमयी तस्माद्वीणेयं सर्वमंगला ।।५६।।

The yogi has an intergrated or total view of life. He sees variety in unity. For him the musical instruments are not the result of the unification or organisation of the variety of the sounds produced by nature, but are the result of an attempt to manifest outside the variety of his inner vision. This truth is corroborated by common experience about musical instruments.

.13.

Consonant sounds predominate in the avanaddha, (drums) class. In the tonal aspect avanaddha vadya-s stand lower than the stringed and the wind instruments. Stringed instruments are the best representation of tonal manifestation. The playing of the flute involves the vital air and the fingers and occupies the middle position. Thus we see that the development and evolution of musical instruments on the basis of variety of toanl manifestation is supported by the inner experience of Nada.

4. It has been said that through the pursuit of Nada, all the accumulated sins get destroyed and the conciousness and vital air dissolve in Niranjana (the unpolluted one).

> सदानादानुसंधानात् क्षीयन्ते पापसंचयाः ।
> निरंजने विलीयेते निश्चितं चित्तमारुतौ।।
>
> हठ०यो०प्र० १०५।१७६

In Yoga the pursuit of Nada is instrumental in attaining liberation. Yogi-s talk about two kinds of Nada 'Anahata and Ahata. The 'sound' heard during the inhalation and exhalation of air is 'सो हम् ' So-ham' and it is related to the heartbeat. Hence they called it Anahata. This has been described as 'हृज्जत्वात् नित्यत्वाद्वा ' in the Upanisada. Because of its being connected with the heart-beat, it is said to

.14.

originate from the heart, but it is eternal like the Atman. This 'Anahata Nada' is said to convey a specific meaning. (THAT I am) स: अहम् =I am = That I am.

But Yogi-s have never said that Ahata Nada conveys any specific meaning. The sound os 'soham' is experienced in the Ajna cakra by the mind. Upanisadas say that there are as many creatures (Jiva-s) as there are Nada-s. So long as there is Nada, there is mind. By controlling the 'सो हम्' Nada which accompanies inhaling and exhailing Yogi-s gain longevity and power.

The culmination of the practice of yoga is 'Tantra. Just as Sakti cannot subsist without Saktiman, similarly Tantra has no independent existence without Yoga. That is why, one also finds a discussion of Nada and 'Bindu' in Tantra and that is pertinent to this paper. Here 'Bindu' is said to evolved from Nada.

सच्चिदानन्दविभूवात्सकलात्परमेश्वरात् ।
आसोच्छक्तिस्ततो नादो नादबिन्दुसमुद्भव: ।। शारदा तिलक ११७

But in the Upanisads, the evolution of Nada from Bindu has been described in terms of four-fold Vak-s. Besides this, 'Bindu' is also that which is meditated upon, by reciting the first 'Sasabda' 'Bijaksara' 'Om' and it has been called 'Nada-kalatita or beyond Nada and Kala. बीजाक्षारं परं नाद तस्योपरि स्थितम्, सशव्दश्चाक्षारे क्षोणे नि:शव्दं परमं पद्मम।।

In Dhyana-bindupanisada, the Bindu has also been expressed in the sense of 'Paurusa' (Virility) while describing the qualities of Bajroli-Mudra.

एवं संरक्षयेद् बिन्दुं मृत्युं जयति योगवित् ।
मरणं बिन्दुपातेन जीवनं बिन्दु धारणात् ।।

The vital air is instrumental in the manifestation of Nada [1], which is the origin of Kala [2] and Bindu [3], A producer, receiver and medium of transmission is essential for the manifestation of sound. Nature has made the vital air the medium for Nada through which it is manifested.

Prana vayu, born of the Mahabhuta Vayu (Subtle vayu) is also invisible, just like its cause, its perception is possible by touch alone. The Prana is composed of the Sattvika part of the Mahabhuta - Vayu. It takes the same form, shape, colour and complexion as that of the particular body with which it mingles. It stays in the physical frame, dividing itself into ten parts. It is in incessant motion just like air (Pavana) which gives life to it. Its action never stops in any of the states of wakefulness (jagrat), dream (svapna) and deep sleep (susupti) and

.16.

is always in a state of perpetual motion. It is prana, for it is the life-principle and source of energy of every creature.

प्राणयति, लीवयतोति प्राण:

In the state of upliftment of Prana (Pranothana) when it (prana) becomes kinetic : i.e. starts action on different cakra-s then perception of ecstatic blissful touch alone is tangible. The vision of the motion of Pranavayu on cakra-s is had only by those yogi-s whose Kundalini has been awakened. Awakening of Kundalini is a special event which occurs by the grace of God. In the physical frame of the yogi, which is purified by the practice of Astangayoga, the awakened Kundalini illumines by its glow all the inner centres (cakra-s) and parts of the entire body. In this unprecedented light, by the perception of wonderful phenomena and subtle lements in the body as they are, the direct vision of truth (Vijnana) is attained. In meditation the yogi attains the ultimate scientific knowledge of the secret, mystic and spiritual aspect of each and every element. The mystery of the creation unfolds itself to him.

In the texts on music e.g. Sangitaratnakara, the locations (or places) of seven Svara-s, Sadja, Rsabha, Gandhara, Madhyama, Pancama, Dhaivata and Nisada are

said to be the petals of the Visuddni Cakra.

Apart from the yogi-s, the exponents of music have accepted Nada (sound) as the only means of the attainment of their goal viz. liberation. In the social life of their age they could not overlook the basic values of the spiritual and material concepts prevalent in the society at large. Yoga bestowed strength and originality to the evolution of the exposition of music.

The word Sabda वाघ्वात्मको पवेञ्क्वद्: of Natya-sastra has been replaced by Nada in the Brhaddesi of Matanga. The musicians enjoyed the full benefits of the special significance hidden in the word Nada which the yogi-s enuniciated or expounded. In the field of music right from Matanga the word Nada has been used with special significance.

The importance and eulogy of Nada is obvious in all the writings of post-Matanga period. The author of Sangeeta Ratnakara was not satisfied even by assigning the epithet 'Nada-Brahman' to 'Nada'. By personification of Nada as Brahma, Visnu and Mahesa, he at once assigned to Nada all the three cosmic forces namely of creation, sustenance and annihilation together.

.18.

चैतन्यं सर्वभूतानां विवृत्तं जगदात्मना ।
नादब्रह्म तदानन्दमद्वितीयमुपास्महे ।।१।।
नादोपासनया देवा ब्रह्माविष्णु महेश्वर: ।
भवन्त्युपासिता नूनं यस्मादेते तदात्मका:।।२।। (सं०र० १३३)

In Brhaddesi, Matanga has applauded Nada and its all - pervaling energy as :-

न नादेन विना गीतं न नादेन विना स्वरा: ।
न नादेन विना नृत्तं तस्मान्नादात्मकं जगत् ।।

नाद रूप: स्मृतो ब्रह्मा नादरूपो जनार्दन: ।
नाद रूपा पराशक्ति र्नादरूपो महेश्वर: ।। वृहद्देशी श्लो० १७-१८

There is a significant influence of 'Yoga-Darsana' on Brhaddesi the work of Matanga. The work, therefore begins with an eulogy to Nada and its power.

यदुक्तं ब्रह्मण: स्थानं ब्रह्मग्रन्थिश्च य: स्मृत: ।
तन्मध्ये संस्थित: प्राण: प्राणाद् वह्निसमुदगम: ।।१६।।

वह्निमारुतसंयोगान्नाद: समुपजायते -- ।
नादादुत्पद्यते बिन्दुर्नादात सर्वं च वांमयम् ।।२०।।

कन्दस्थान समुत्थो हि स च पंचविधोभवेत् ।
सूक्ष्मश्चैवातिसूक्ष्मश्च समीर संचारन्नध: ।।
ऊर्ध्वं च करुतें सर्वां नादपद्धतिनुद्धताम् ।।२१।।
सूक्ष्मश्चैवाति सूक्ष्मश्च व्यक्तो व्यक्त कृत्रिम: ।।२३।।
कण्ठे मध्ये स्थितो व्यक्त: अव्यक्तस्तालु देशके।।२४।।
कृत्रिमो मुखदेशो तु ज्ञेय: पंचविधो बुधै: ।।२५।।

वृहद्देशी पृ०

Nada is the only element that regulates the entire transaction of expression in the world. The three components of music viz. "गीतं, वाद्यं, नृत्तं " are based on Nada.

गीतं नादात्मकं वाद्यं नादव्यक्त्या प्रशस्यते ।
तद्द्वयानुगतं नृत्तं नादाधीनमतस्त्रयम् ।।१।।

नादेन व्यज्यते वर्णः पदं वर्णात्पदाद्वचः ।
वचसो व्यवहारोऽयं नादाधीनमतो जगत् ।।२।। सं०र० १।१।२

Not only in the Brhaddesi of Matnga but also in Sangeeta Ratnakara the manner in which the Sthana-s (locations), the process of origin of Nada, types of Nada, their nomenclature and the basis of the definete number of Sruti-s to be accepted as twenty two only, has been spoken of, all this exposition, is primarily influenced by yoga alone. For example;

आत्मा विवक्षमाणोऽयं मनः प्रेरयते मनः ।
देहस्थं वह्निमाहन्ति स प्रेरयति मारुतम् ।।

ब्रह्मग्रन्थिस्थितः सोऽथ क्रमादूर्ध्वपथे चरन् ।
नाभिहृत्कण्ठमूर्धास्येष्वाविर्भावयति ध्वनिम् ।।सं०र० १-३।३-४।१०।६४
एवं कण्ठे तथा शीर्षे श्रुतिद्वाविंशतिर्मता ।।

In the Sangeeta-Samaya-Sara also, it has been said in different words:

"त्रीणि स्थानानि हृत्कण्ठ शिरांसीति समासतः------
द्विगुणः क्रमात्।"

In the context of the origin of Nada, Matanga has given nirukti of the word Nada and that too is

influenced by yoga.

नकारो प्राण इत्याहुर्दकारश्चानलो मतः ।
नादस्य द्विपादार्थो यं समीचीनो मयोदितः ।।२२।। बृह०

In Sangeeta Ratnakara also the same nirukti has been followed:-

नकारं प्राणनामानं दकारमनलं विदुः ।
जातः प्राणाग्नि संयोगात्तेन नादो भिधीयते ।। सं०र० १-३।६४

In the attainment of salvation, Nada is the true guide. On this earth, none other than Nada is the appropriate beaconligh, because it is the embodiment of both 'Light' and 'sound' (Rupa and Sravyata).

वीणा वादन- तत्वज्ञः श्रुति जाति-विशारदः ।
तालज्ञश्चाप्रयासेन मोक्षमार्गं संगच्छति ।।
याज्ञ०स्मृ० ११५।पृ० ३५०

In Sangeeta Ratnakara too it is said:-
शाश्वताय च धर्माय कोर्त्यैनिः श्रेयसाप्तये ।
आविष्करोति संगीतरत्नाकर मुदारधीः ---।। सं०र० १-१४-११

In defining sangeeta as गीतं वाद्यं तथा नृत्यम् १।१-२१।२३ the need and importance of 'नृत्यम् ' (dance) and the union of all the three in sangeeta is supported only by a yogic experience.

Why there is the descending order of svara-s in the gatra-veena (bodily veena) and the ascending order in daravi veena (wooden veena) is explained and

justified only by yoga. It has already been stated that the Muladhara Cakra is invested with the element of earth, the Svadhisthana Cakra with that of water, the Manipura with fire, the Anahata Cakra with air and the Visuddhi Cakra with space or akasa. It may be observed that in the lower parts of the body are manifested the grosser elements and to the higher parts are manifested the subtler elements.

Akasa is considered to be the substratum of sound and a k a s a is the subtlest of the fine elements. Musical sound or Nada is said to manifest itself by the interaction of fire (energy) and air (i.e. breath) in the region of the body extending from the Manipura Cakra to the Visuddhi Cakra, i.e. from the navel to the throat. The principle involved is that the grosser the medium of sound production the lower the pitch of the sound produced and vice versa. This explains the ascending order of notes in the gatra veena in the yogic terms. Related to this phenomenon is the relationship of the length of the vibrating string and the pitch value of the notes produced. The lesser the length of the string the higher the pitch. This principle too was discovered by the yogi-s in the operation of the gatraveena which is plucked at its upper extremity where vocal organ (vocal apparatus) is located.

The daravi-veena being struck at its lower extremity follows a descending order of notes. In addition to this above stated principle the next important influence of yoga is varna (Colour & caste). Association of colour with elements finds its traces in ancient books like Siksha-s Yajavalkya Siksha contains the description of association of colour with notes of music and as well with elements. A similar type of description is found in Nardiya Siksha. It gives the colour of musical notes. Astrology too has emphtically emphasised on varna (Colour & castes). In his theosphical book Thought Forms C.W. Leadbeater has correlated colour with emotions like anger, hatered like etc, e.g. Green represents adaptability. "The brilliancy and the depth of the colours are usually a measure of the strength and the activity of the feeling. In the chapter of Sangita Rathakara dealing with sruti and jati, kula, devata, rsi, chanda, rasa etc. of svara-s, the author has talked about colours and caste of svara-s. This was possible only due to the impact of yoga. Nada contains jyotis-tattva, that is why, Rupa (form or colour) is obtained in it. The seven colours associated with seven svara-s correspond with the seven colours ascribed to Prthvi (earth) in Nyana Sastra.

"तच्च शुक्ल,-नोल,-पीत,-रक्त हरित-कपिश-चित्रभेदात् सप्तविधम्"

तर्कसंग्रह·३३ प्र०परि०

Rupa (Colour) is the quality (guna) of Agni (fire) and Agni is one of the two ingredients of Nada, the other one being Vayu. Since each of the five elements (bhuta-s) contains the essence of the remaining four, Agni & Vayu, the ingredients of Nada, can also be understood as including the colour ascribed to Prthvi (earth).

To understand the meaning of quite a few terms that have been used in a particular sense in texts on music we have to take the shelter of Yoga and Tantra-Sastra e.g. Bindu, Kala कला Matra, Kala काल Prana & Bijaksara. The symbolic representation of Bijaksara-s 'अ' and 'इ' in sequence of musical notations स रि ग म प ध नि is also due to tantra. 'अ' symbolises Visnu and 'इ' symbolises Sakti respectively. In this connection it will not be irrelevant to point out that due to all these reasons music has the honour of being the highest Kala. R Sathyanarayana in his article Ganapati and Karanataka Music 'in journel of the Indian Musicological Society (Vol. 5, No. 2,1974.) has shown that Yoga and Tantra influenced the music terminology and grama-s. The Brahmavaivarata Purana explains the acronymy in the name of 'Ganapati' by asserting that

ga stands for Vivek a and Na for Moksha and so on, Ga denotes Brahman or Manas and Na signifieo voice or sound. "There are also other interensting yogic significances : sadja is born in the Muladhara-Chakra which is presided overby Ganapati."

Moreover in the physical world five main types of motion are observed viz. उत्क्षेपण (upthrust) अवक्षेपण (downward flow), आकुंचन (contraction) प्रसारण (Expansion) and गमन (perpetual motion). This observation of the process of physical creation has been utilized by musicians in reference to tala. The first four are used in the kinds of 'Nih-sabda-Kriya-s' (silent beats) viz. Avapa, Niskrama, Viksepa and Pravesa. The fifth viz. gamana or incessant motion is used in the cyclic motion of tala. The motion of Caturasra and tryasra in tala is also influenced by yoga. The vision of the process or the motion of Pranotthana, Nada and Prakasa (light) was perceived for the first time only on the Muladhara Cakra. It is just possible that the conception of 'Caturasra Talas might have come from the same experience, for that is faour-petalled lotus and therein is located a four-angled Yantra too. This conception of motion is the fountain-head and thence spring forth the variety of other tala-s. The Cakra named Manipura

which is ahead of Muladhara and nearer to the navel point is ten-petalled, but the mode of motion of Prana-Vayu therein is triangular. Therefore, the conception of tryasra in tala could have the bearing and impact of the experience of this Cakra.

In the beginning, in the absence of the purification of the nervous system, the motion of the Pranavayu gets slowed down and is obstructed whereas the motion of Prana in the body purified through pranayama is tremendously fast and the Cakra-s appear in motion at that time. Thus yogic experience must have had a hand in fixing the motion, flow and punctuation of tala-s.

The inspiration for avanaddha (अवनद्ध)) and ghana (घन) instruments is received upto Manipura Cakra. The earth and water elements predominate upto this point. After this, due to the predominance of vayu-tattva wind (susira) and string (tata)instruments are possibly-born, in short, the complete picture of the evolution of ahata or ghataja Nada is available to us today in the form of music. The Nada accepted in yogic experience of abda and Prakasa is gained simultaneously in a unified way. This experience i s direct and yet beyond the senses. Yoga is the culmination of the realisation of this

.26.

anahata Nada. The systematised worship (upansana) of Nada as applied to the human upliftment in social life is Tantra. Meditation, practical experience and application turned the cognitive experiences into eternal truths. Like the taste-perception of a dumb person, the experiences of yoga were confined to the individual, whereas the same consciousness got diverse expressions in the form of music and got the strength to make the nook and corner of the spheres resonste or echo with various sounds (typified by musical instruments.), just as the experiences obtained from yogic practices made the entire consciousness of the solitary yogi'still ' on the one hand and a resonator of cosmic consiousness on the other. It is said in Hatha-yoga-pradipika :-

बद्धं तु नाद-बन्धेन मन: संत्यक्त चापलम् ।
प्रयाति सुतरां स्थैर्यं छिन्नपक्षा: खगोयथा।।

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इन्द्रियाणां मनो नाथो मनोनाथस्तु मारुत:।
मारुतस्य लयोनाथ: स लयो नादमाश्रित: ।।

रसस्य मनसश्चैव चंचलत्वं स्वभावत: ।
रसो बद्धो मनोबद्धं किं न सिद्धयति भूतले ।।

२६।१४५

It is obvious from the analysis or music and sound in yoga that the complete development of the two different manifestations of Nada-tattva is yoga and music.

Ahata Nada is definitely dependent upon the anahata-Nada. In other words Ahata derives its source and inspiration from Anahata. The question of the existence of the Ahata Nada does not arise in the absence of Anahata Nada.

This statements of Sarngadeva embodies the core of the efficacy of Nada.

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१. According to Tantra, Sakti emanated from the Sakala Parmesvara who is sat, Cit and Ananda. From Sakti emanated Nada and Bindu has its origin in Nada. The nature of Bindu in Tantra is different from that of the Bindu (Zero) '0' in mathematics. In both though the Bindu is beyond measurement; Tantrika Bindu is spaceless or incapable of location. It is that state of Sakti from where its action of creation begins. In Tantra, the Bindu-Tattva is also referred to as the Isvara-Tattva. Since both are said to be without beginning or end, they cannot be assigned any position imagined or imaginable. Both Nada and Bindu, are in fact, different states of energy or Sakti in which the potential energy gets ready for creation. Bindu is the name of the concentrated states of energy. In this way the energy which in the Sattvika state of consciousness in Brahman, enters the Rajasika state of activity in Nada-Tattva, and becomes gross in the

Tamasika state in the form of Bindu. Matamga in his Brhaddesi talks of the origin of Bindu from Nada.

नादादुत्पद्यते बिन्दुस्तत: सर्वं च वाङ्मयम् ।

२. Kala (कला) has also been mentioned in this context, when the energy in the form of congnition (Cidrupini Sakti) dissolves and becomes one with Brahaman and Brahman becomes Niskala (Undifferentiated). When the same energy becomes kinetic, then Brahman is Sakala (differentiated). Both these states of Brahman are eternal. But when it is said that one-fourth is in Dyuloka

("एतावानस्य महिमातो ज्यायांश्च पुरुष: ।
पादो स्य विश्वाभूतानि त्रिपादस्यामृतं दिवि।"

ऋग्वेद पुरुष सूक्त.

then one has to understand that Sakala Brahman is divided into 16 Kala-s Kala is a special phase of energy since creation is only a condensed form of the infinite power.

Kala is one of the six kancuka-s (sheaths) of energy, viz.

1. Maya 2. Kala(काल) 3. Niyati 4. Raga
5. Vidya 6. Kala(कला)

१. सा नित्यतास्य शक्ति र्निष्कृष्य निधनोदयप्रदानेन।
नियत परिच्छेदकरो क्लृप्तास्यात् कालतत्वरूपेण (तत्वसंदोह ५।११)

२. यास्य स्वतन्त्रताख्य शक्ति: संकोचशालिनो सैव।
कृत्याकृत्येष्ववशं नियतममुं नियमयन्त्यभून्नियति।। (तत्व संदोह ५।१२)

३. नित्यपरिपूर्णतृप्ति: शक्ति: तस्यैव परिमिता नुसतो।
भोगेषु रंजयन्तो सततममुं रागतत्वमाख्याता।। (सत्व स० ५।१३

४. सर्वज्ञतास्य शक्ति: परिमित तनुरल्पवेद्यमात्रपरा ।
ज्ञानमुत्पादयन्तो विधेति निगद्यते बुधैराद्यै: ।।(तत्व सं० ५।१४

५. सर्वकर्तृताशक्ति: संकुचिता कतिपयार्थमात्रपरा ।
किंचित्कर्त्तारममुं कलयन्तो कीर्त्यते कला नाम।। (त०सं० १।१५)

There are two types of Kala. (1) Antah (inner) (2) Bahir (outer). Bahya Kala-s are sixteen. The sixteenth Kala is Amakala and is in the form of yoni (Womb) and Pasa (Snare). The seventeenth Kala is Nirvana Kala in which there is liberation from the sins (of attachment of bondage).

According to a different classification the sixteen Kala-s are 5 Jnanendriya-s, 5 Karmendriya-s 5 Tanmatra-s and sixteenth is the mind.

In Prasnopanisad we have another nomenclature of sixteen Kala-s given by sage Pippalada-

1. Prana	2. Sraddha	3. Akasa	4. Vayu
5. Tejas	6. Jala	7. Prithvi	8. Indriya
9. Manas	10. Anna	11. Virya	12. Tapas
13. Mantra	14. Karma	15. Loka	16. Nama

अरा इन रथनाभौ कला अस्मिन् प्रतिष्ठिता: ।
तं वेद्य-पुरुषं वेद यथा मा वो मृत्यु: परिव्यथा इति ।।
प्रश्नोपनिषद् ६.३०.६

In Netra-Tantra one finds the following classification of Kala

1. Samani of Seven types:

   (a) Sarvajnna (b) Sarvaga (c) Durga
   (d) Savarna (e) Sprhana (f) Dhrti
   (g) Samana.

2. Annjani of Five types :-

   (a) Suksma (b) Susuksma (c) Amrta (d) Amrta-sambhava (e) Vapini

3. One Kala of Mahanada viz. Urdhvagamini.

4. Four Kala-s of Nada.

   (a) Randhika (b) Dipika (c) Rocika
   (d) Mocika.

Kala, as the inner energy of Nada and the like, divides them (Nada etc.) into four Anda-s viz. (1) Brahmanda (2) Mulanda (3) Mayanda and (4) Saktyanda.

Just as Brahmanda is enveloped by either (Akasa) the remaining three Anda-s viz. Mulanda, Mayanda and Saktyanda are enveloped by Prakrti, Maya and Sakti respectively. Saktyanda is pervaded by Santakala. Its limits are within the Sakti Tattva and Savidya and it includes the sakti-s of Samani , Vyapini, Anjani and their Kala-s plus the Sakti-s of Nada and Bindu and their Kala-s. The gods (devata-s) of Saktyanda are named Mantra-Mahesvara, Mantresvara, Mantra and Vidyesvara.

3. Between Suddha Vidya and Maya Tattva is Vijnana-Kala which through evolution of Bindu creates the world.

Beyond this the Mayanda is pervaded by Vidyakala. Its gods are Brahma, Visnu and Rudra. The entire creation from Brahma to a blade of grass remains in Mulanda and Brahmanda. The meditator by worshipping the presiding deities and Kala-s and by their grace can attain the highest state of union with the Brahma-Tattva or Sakti Tattva, thus achieving the ultimate goal of life.

This great energy (Mahasakti) is described in many works on yoga. The yogi-s, the Kundalini is seated in Sahsrara in the form of light. To vitalise the whole cells radiated by the Susmna Nadi and even in fact through the physical frame this energy flows deep through the minutest subtle Varjra, the subtler Citrini and the subtlest innermost Brahma-Nadi. The subtlest Nadi has been compared to a lotus fibre (Mrnala tantu) in the Upanisad-s.

कुण्डले अस्या: स्त: इति कुण्डलिनी ।
मूलाधारस्थ वह्यात्म तेजोमध्ये व्यवस्थिता ।।
जीवशक्ति: कुण्डलाख्या प्राणाकाराथ तैजसी।
महाकुण्डलिनो प्रोक्ता परब्रह्मस्वरूपिणी।।

शव्दब्रह्ममयी देवी एकानेकाक्षराकृति:।
शक्ति कुण्डलिनो नाम बिसतन्तुनिभा शुभा।। यो०कुण्डल्युपनिषद्)

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अष्टधा कुण्डलीभूतामृज्वीं कुर्याद् कुण्डलीम् (योगशिखोपनिषद्)

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कुला कुण्डलिनी चैव नादशक्ति-समन्विता ।। षट चक्र निरूपणम्

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मूलाधार आत्मशक्ति: कुण्डलिनी परदेवता ।
शयिता भुजगाकारा सार्ध त्रिवलयान्विता ।। (घेरण्ड संहिता)

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कन्दोर्ध्वं कुण्डलीशक्ति: सुप्तामोक्षाय योगिनाम् ।
बन्धनाय च मूढानां यस्तां वेत्ति स योगवित् ।।
कुण्डली कुटिलाकारा सर्पवत् परि कीर्तित: ।
सा शक्तिश्चालिता येन स युक्तो नात्र संशय: ।।

(हठयोग प्रदीपिका पृ० १०७-१०८।११३

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मूलाधारे मूलविद्यां विद्युत्कोटि सम प्रभाम् ।
सूर्यकोटि प्रतीकाशां चन्द्रकोटिदवां प्रिये।।
बिसतन्तु-स्वरूपां तां बिन्दु त्रिवलयां प्रिये।।

Kundalini is the Nachiketa fire of the Kathopnisad. The western scholar Sir John Woodroffe called it 'The serpents fire' "(सर्पवत् वलयान्विता अग्नि)" only after the complete work of a 100 days will the light be real, then will it become spirit fire, the heart is the fire, the fire is the Elixir". Madam Blavatsky called it 'cosmic electricity', because this is an immense power. She has said that whenever light travels at the rate of 185000 miles per second, Kundalini does so at 345000 miles per second. It is faster than light.

"Kundalini is called the serpentine or annular power, on account of its spiral-like working or progress in the body of the ascetic, developing the power in himself. It is an electrical, occult or fohatic power, the great pristine force which underlines all organic and inorganic matter".

(The Voice of Sieence . 27.)

"This above stated energy (Sakti) polarised in two forms namely static (potential) and dynamic (kinetic-the working force of the body as Prana)" Energy takes two forms one is static and other is Kinetic.

As the mountain Meru is said to be the mainstay of the planet, the earth, so also the vertebral column is the mainstay of the body. The lumbar column is constituted of 33 vertebra. This figure of 33 may be related to 33 crore Devatas or be computed by taking the following into account:-

Prajapati (1) Indra (1) , Astavasu-s (8) Dwadasa Aditya-s (12) and Ekadasa Rudra-s (11). This can be conceived on the basis of the relationship of the macrocosm and the microcosm.

The spinal chord is hollow from within. Its lower extreme is pointed and small. The surrounding portion of this angular point is known as Kanda.

.34.

Kundalini , the image of the vital force (Mahasakti) stays in this Kanda. Out of the fourteen important Nadi-s, three are main viz. Ida, Pingala and Susumna, Ida from the left and Pingla from the right coil on Susumna in the spinal chord. Susumna Nadi located inside the column starting from the Kanda goes to Sahasrara located in the head. Just as the trunk of the banana plant is formed of concertric layers, so also Vajra, Citrini are coiled around on Brahmanadi and are placed within Susumna concentrically.

Through the practice of yoga, on this Brahama-Nadi the awakened Kundalini overturns and shoots up dancing most briskly in the form of luminous energy to Brahma-Randhra located in the head and then returns. Thus the whole nervous system getsvivified by the vital energy, as if the whole physical frame is kindled and it glows with luminous energy. In the spinal column the shape of these kindled Nadi-s appears to be like that of a serpent in sitting posture with raised hood. That is why this energy is poetically called Kundalini. The awakening of this vital force, viz. Kundalini is perceived in two ways, fire stl in the form of uplift-ment of Prana (Prano-tthana) and secondly, in the state of enlightenment and intense activity. The second one

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is that of Ananda (Bliss) beyond imagination and description.

Inside the spinal column six (seven or eight or nine) Kamala-s or Cakra-s are conceived to be strung in the Brahmanadi. This is popularly called the Sat-cakra. Each cakra has a colour of its own. These six cakra-s are located in front of different parts of the body inside the vertevral column and are known after their names. The complete picture of the Cakra-s described in the Tantric texts is given below in a chart.

We find that in different texts thereis a difference in the number of described Cakra-s and the names of their presiding deities. Some Upanisad-s also contain the description of Kundalini and Cakra-s but it is not as subtle and comprehensive, as is found in Tantric texts. As regards the Cakra-s over and above the wellknown six, it may be said that in the middle of Manipura and Hrdaya Cakra-s there are two more Cakra-s called the Sun and the Moon. Manas-Cakra and Candra cakra and many other names are found for Hrdaya cakra. The location Surya cakra is in the liver, which is predominant in the fire element and the Candra cakra is said to be in the spleen.

योग संप्रदाय-दर्शन

संपादक

डॉ. दि.ब. केळूर

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श्री.श्री.व्यं. नवाते, पुणे.

<u>दिव्यशक्तिरहस्य</u>

लेखक: प.पू. योगिराज श्रीगुळवणी महाराज

स्वत: सिध्द प्रणव :

एतदेवाक्षरं ब्रम्ह एतदेवाक्षरं परं.
एतध्येवाक्षरं ज्ञात्वा यो यदिच्छति तस्य तत्.
एतदालंबनं ज्ञात्वा ब्रम्हलोके महीयते.

या प्रमाणे कुंडलिनी शक्तीच्या अव्यक्त व व्यापक अवस्थेपासून प्रथम वेदांचा बीजमंत्र जो ओंकार त्याचा प्रकाश होतो. ओंकारानंतर निरनिराळ्या देवतांच्या मंत्रांची रचना होते म्हणून कुंडलिनी जागृत झाल्यावर साधकाला प्रथम ध्वनिरूप व शब्द सृष्टीचा आरंभ होतो. तो ओम् हे अक्षर ब्रम्ह आहे व तेच अत्यंत श्रेष्ठ आहे याला जो अंतरात्माच्या ठिकाणी स्वत: स्फुरित जाणतो त्याची जी इच्छा असेल ती परिपूर्ण होते. ते ओम् अक्षरच परम श्रेष्ठ अवलंबन आहे. योग साधनाने या परम आश्रयाला जाणल्याने ब्रम्ह लोकाची प्राप्ती होते.

म्हणून हे (ओम) ब्रम्ह आहे. हे वेदाने सांगणे आहे. ब्रम्ह अवा-इ.मनोगोचर आहे. तद्रूप ते मूर्तिमान ओम् हि मनवाणीच्या पलीकडील आहे. ज्याप्रमाणे ब्रम्हाचे रूप वाणीने व्यक्त केले जात नाही परंतु याचा अंतरात ब्रम्हाप्रमाणे बोध केला जातो. साधारणपणे व्यवहारात येणारी अक्षरे सोळा स्वर, छत्तीस व्यंजने प्रचलित आहेत. व्याकरणाच्या नियमाप्रमाणे उदात्त,अनुदात्त स्वरित भेदाने कित्येक प्रकारचे होऊन ह्स्व, दीर्घ प्लुतादी स्वरांच्या योगाने

उच्चारण केले जातात परंतु उदगीथ स्वरूप या ब्रह्मरूप ओंकारासारखी आकृती असलेले अक्षर कोणतेच नाही. म्हणून याचे उच्चारणही अक्षरांच्या सहाय्याने होऊ शक्त नाही.

ऱ्हस्वो दहति पापानि दीर्घोमोक्षदायक:
आप्यायन: प्लुतो वापि त्रिविधोच्चारणेनतु.

शास्त्रात वैदिक मंत्र जपाच्या फलाचा अवधी सांगितला आहे म्हणून सामवेदाने मंत्र षडज, ऋषभ, गांधारादी स्वराने उच्चारण करून जप हवन केल्याने त्याचे फळ तत्काळ मिळते. सामवेदाने उदगाते उदगीथ उपासनेत वेदाचे स्वराने ओम् चा ध्वनी करतात. त्याचा स्वरही त्याच्या अंतरंगात आहे. हा ओम् स्वत: सिध्द आहे. याच्या विचित्र स्वरांची योजना कुंडलिनीशक्तीकडून होते तेव्हा याचा ऱ्हस्व उच्चार होण्याने पापाचा नाश होतो. दीर्घ उच्चारण्याने मोक्ष प्राप्ती होते आणि प्लुप्त स्वराच्या उच्चारणाने शरीर, मन आणि प्राण यांची तृप्ती होते.

सिध्द महायोगाचे कार्य संपादन करणारी योगमाया कुंडलिनी शक्ती वैदिक मंत्राच्या समस्त स्वरांचे संपादन करते. त्यावेळी हा ओंकार परावाणीत प्रस्फुरित होऊन पश्यंती आणि माध्यमा यांच्यातून जाऊन वैखरीने व्यक्त होतो आणि वैखरीची क्रिया सुरू होताच साधकाच्या मूलाधार व तालुमूलाच्या कंपनाला आरंभ होतो आणि कंपनाबरोबर षडज,ऋषभ गांधारादी विचित्र स्वराने दीर्घ प्रणावाचे उच्चारण होते. या प्रणव ध्वनीचा अर्थ स्वर, व्यंजन वर्णाशी कोणताही संबंध राखीत नाही. मूलाधारापासून कुंडलिनी शक्तीच्या प्रेरणेने साधक स्वत: उच्चारण करतो त्यावेळी साधक प्राय: अर्थसंज्ञाशून्य होत असतो व हृदयाकाशात पुष्कळशा नादांचा गुंजारव ऐकतो परंतु नादांचा निर्देश करू शकत नाही आणि तो आवेशाने पूर्ण झाल्याने त्याला हे ज्ञान रहात नाही, की आपण फार जोराने ध्वनी करीत आहोत. हा गगनभेदी ध्वनी जर रात्रीच्या वेळी खुल्या मैदानात केला जाईल तर तो दोन-तीन मैलांपर्यन्त मन मुग्ध करून टाकतो. परंतु ध्वनीचे स्वराधिक समजून येत नाहीत. परंतु पुष्कळ स्वरमिश्रित अशा अदभुत

स्वरांची प्रचीती येते. त्याप्रमाणें या स्वत: प्रणवाचा ध्वनी उमयतांना अर्थबोध रहित आश्चर्यात निमग्न करतो. याच्या स्वराचा काही भाग हुंकार शब्दाशी समान असतो: परंतु बरोबर हुंकारच असे म्हणतां येत नाही.

तत्वगुणांचा संचार :

ज्यावेळी वैखरी क्रियेनें होणारा प्रणवज ध्वनि काही वेळाने लय पावतो त्यावेळी साधक आपल्या इच्छेनेंही तसा ध्वनी करू शकतो परंतु मानसिक आनंद येत नाही व दहा-पाच वेळा ध्वनी करताच चिताला नको वाटते. दमल्यासारखे वाटते व गळयाचा स्वरभंग होतो. स्वभावत: क्रियेच्या आवेशात कित्येक साधकांनी प्राय: नित्य चार-पाच तास याप्रमाणें कित्येक महिने दीर्घकाळ प्रणवध्वनी केला होता. त्यावेळी त्याचा स्वर गगनभेदी होत असे व शरीर स्फूर्तियुक्त राहत असे. महामायाकृत या योगक्रिया कौशल्याचे सामर्थ्य लिहून समजून देणें अशक्य आहे. या दीर्घप्रणव ध्वनीच्यानंतर कित्येक भाग्यवान साधकांचा हा ध्वनी सूक्ष्म होतो. महायोग साधनात याला स्वत: प्रणव जप असे नाव आहे. अव्वत दीर्घ प्रणवजपा पेक्षा या सूक्ष्म जपात मनाला त्याच्या शतपट अधिक सुख अनुभवाला येते. या जपाची क्रिया अष्टौप्रहर चालते. स्वप्नामध्येही साधकाचे मन क्रियाशील राहते. याच्या आरंभाचा व अवधीचा काही नियम नाही.

सूक्ष्म प्रणवजपाचा आरंभ झाल्यानंतर योगापासून प्राप्त होणा-या ऐश्वर्याची मनाला इच्छा होत नाही. या जपामुळे मन अंतर्मुख होऊन राहते व विषयवासनांचा -हास होत जातो आणि मन आत्मतत्वात निष्ठावान व मूर्छीत होऊन राहते. कामक्रोधानी व्यथित होत नाही. प्राणप्रवाह बहुधा चालू असतो परंतु श्वास-प्रश्वास दीर्घ होत नाहीत. साधकाला साधनाला बसल्यावर दुस-या क्रिया कमी होतात व हीच क्रिया मुख्य होते त्याच्याचबरोबर साधकाला सूक्ष्म नाद श्रवण गोचर होतात. कधी कधी दूर व कधी कधी जवळ असे येतात. परंतु या अवस्थेतही साधकाला आत काही दृश्य दिसत नाही. त्याचे मन शांत ,शून्य व एकाग्र राहते. समयानुसार बाहेरची विस्मृती होते. परंतु या अवस्थेत मनाला बाहेरच्या विषयांचे ग्रहण करण्याचे सामर्थ्य असू शकते. या स्वत: प्रणव जपाच्या

अवस्थेत मन धारणेत पूर्ण प्रतिष्ठित होते. त्याच योगाने साधक आलस्य व निद्रा यांना जिंकतो आणि त्याच्या शरीरात नेहमी सत्व गुणाचा संचार असतो.

योगमायाकृत वैखरी क्रियेपासून प्रवर्तित स्वत: सिध्द हा ओम् वर्णरूप म्हणता येत नाही. त्याला ध्वनिरूप म्हणण्याची आवश्यकता आहे. कारण षाड्ज, ऋषभ, गांधार, मध्यम, पंचम धैवत आणि निषाद या सप्त स्वराबरोबर याच्या ध्वनीचा संबंध प्रतीत होतो. परंतु स्वराचा पृथक निर्देश होत नाही. म्हणून याला अद्भूत किंवा विचित्र म्हटले असता अत्युक्ती होणार नाही. स्वत: प्रणव जपात मनाची अवस्था मनच जाणते. सूक्ष्म प्रणव जपाच्या ध्वनीच्या स्वरासंबंधी सांगणे आता पर्यन्त कोणालाही साधकाला शक्य झालेले नाही. साधक या क्रियेला अनाहत ओम् ध्वनी अथवा नादानुसंधान म्हणून संज्ञा देतो. परंतु हे अनाहत ध्वनी व स्वत: प्रणव जपाचा ध्वनी यांच्यात साम्य आहे. कारण अनाहत ध्वनी दहा प्रकारचा असतो. प्राणवायु रंध्रात जातेवेळी भेरी झारझारी शब्द ऐकू येतात व शेवटी प्राण ब्रम्हरंध्रात स्थिर झाल्यावर किंकिणी, वंशी, वीणा, भ्रमरादिकांचे शब्द ऐकू येतात. म्हणून नादानुसंधान व स्वत: -प्रणव यात अवश्य भेद आहे. कारण नादानुसंधान स्थिर व चिरस्थायी असते व स्वत: - प्रणवरूप अस्थिर क्षणस्थायी असतो.

प्रणव नाम ओम् लक्ष्यार्थ आहे :

सर्व पदार्थांचे नाम वाच्यार्थ असते. परंतु ज्यांचे रूप लक्ष्यार्थ असते. तसेच हे पवित्रपरम ब्रम्हाचे रूप ओम् जपादी साधनकालात प्रणवनामाने वाच्यार्थ होते आणि जप केल्यानंतर स्थिती कालात ब्रम्हाचे रूप ओम् लक्ष्यार्थ असते. असे कोणा एका व्यक्तीचे नाव हरी आहे. हरी शब्दाने हरीच्या रूपाचा बोध होत नाही. नावाचा बोध होतो. नाम वाच्यार्थ आहे. हरीची भेट झाल्यावर त्याच्या रूपाचा बोध होतो. ते त्याचे रूप लक्ष्यार्थ आहे. म्हणून योगदर्शनात सांगितले आहे की " तस्य वाचक: प्रणव: " प्रणव ईश्वराचा वाचक आहे. अर्थात त्याच्या नामाचा प्रकाशक आहे. म्हणून तो वाच्यार्थ आहे. योगसाधन करून अथवा जपसाधन करून ईश्वराशी ऐक्य पावल्यावर ओम् लक्ष्यार्थ होतो म्हणून प्रणव नाम असून ओम् वस्तू आहे.

हा ओंम् स्वर व्यंजन वर्ण नाही. जो वर्णही नाही तो. ह्स्व दीर्घ अथवा प्लुत कसा असू शकेल. म्हणून हा वर्णरूप प्रणव शब्द नाम-वाच्यार्थ आहे आणि ध्वनिरूप हा ओंम् शब्द लक्ष्यार्थ आहे. हा हृदयग्रंथीभेदी ओंम् चा विषय योग साधनाने अनुभवगम्यच आहे.

यन्नमस्यं चिदाख्यातं यत्सिध्दीनां च कारणम् .
येन विज्ञातमात्रेण जन्मबंधात्प्रमुच्यते .
अक्षरं परमोनाद: शब्दब्रम्हेति कथ्यते .
मूलाधारगताशक्ति: स्वाधारा बिंदुरूपिणी .
तस्मादुत्पद्यते नाद: सूक्ष्म बीजादिवांकुरम् .
तां पश्यंती विदुर्विश्वं यया पश्यंति योगिन: .

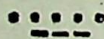
जो चिद्रूप आहे, नमस्कार करण्याला योग्य आहे, जो सिध्दीचे कारण आहे आणि ज्याच्या विज्ञानमात्राने जीव जन्ममरणाच्या बंधनापासून मुक्त होतो अशा अक्षर ओंम्च्या ध्वनीच्या परमनादाला शब्दब्रम्ह म्हणतात: मूलाधारचक्र स्थित बिंदुरूपिणी शक्तीपासून हा ध्वनिरूप ओंम् प्रकट होतो. याचा साधकाला मूलाधारामध्ये परावाणी व नाभीमध्ये पश्यंतीच्या रूपाने अनुभव येतो.

हृदयं व्यज्यते घोषो गर्जत्पर्जन्यसान्निभ:
तथा स्थिता सुरेशानि मध्यमेत्यभिधीयते.
प्राणेनच स्वराख्येन प्रथिता वैखरी पुन: .
शाखापल्लव रूपेण तात्वादिस्थानघट्टनात्.
अक्षरेभ्य: पदानि स्यु: पदेभ्यो वाक्य संभव: .
सर्वे वाक्यात्मका मंत्र वेदशास्त्राणि कृत्स्नश: .
पुराणानिच काव्यानि भाषाश्च विविधा अपि .

आणि हृदयात मध्यमावाणीत मेघगर्जनेप्रमाणे या ओंम्च्या ध्वनीला ऐकतो आणि हृदयस्थ प्राणाच्या सहाय्याने तालुमूलादी स्थानापासून शाखापल्लव रूपाने, वैखरी वाणीने, अकारापासून क्षकारापर्यन्त अक्षरांच्या शब्दाद्वारा

प्रकट करतो. त्या अक्षरापासून पद व पदापासून वाक्य बनते. जितके मंत्र, वेदशास्त्र पुराणादी आहेत ते सर्व आणि काव्ये व नानाप्रकारच्या देश-देशांतराच्या भाषा या सर्व वाक्यमय आहे.

सप्तस्वराश्च गाथाश्च सर्वे नादसमुद्भवा .
एषा सरस्वती देवी सर्वभूतगुहाश्रया .
वायुना वन्हियुक्तेन प्रेर्यमाणा शनै: शनै: .
तद्विवर्तपदैर्वाक्यैरित्येवं वर्तते सदा.
य इमां वैखरी शक्ति योगी स्वात्मनि पश्यति .
स वाक्सिध्दमवाप्नोति सरस्वत्या: प्रभावत: .
वेदशास्त्रपुराणानां च स्वयं कर्ता भविष्यति .

याप्रमाणे सप्तस्वर आणि गाथा या सर्व ध्वनिरूप नादापासून उत्पन्न होतात. यांना उत्पन्न करणारी सरस्वती देवी सर्वांच्या हृदयात स्थित आहे. कुंडलिनी शक्तीमुळे प्राण व अग्नीच्या प्रेरणेने याचा साधकाला क्रमाने अनुभव येतो. हीच वैखरी शक्ती विवर्तरूप होऊन वाक्यरूपाने प्रकट होते. जो साधक वैखरी शक्तीला आपल्या ठिकाणी पाहतो त्याला सरस्वतीच्या कृपेने वाक्सिध्दी प्राप्त होते व तो स्वयं वेदशास्त्र-पुराणांचा कर्ता होतो.

दिव्य शब्द नादोत्पत्ती :

उक्तात्ममानत: पूर्वं पश्चात् च विविध: क्रमे .
अभिव्यक्तं एतस्य नादास्तत्सिद्धिसूचका: .
अनाहतमनुच्चार्थ शब्दब्रह्म परं शिवम् .
तस्माच्छब्दा नव प्रोक्ता प्राणविद्भिस्तुलक्षिता: .

अंतरात ज्योतिरूप आत्म्याच्या प्रकाशापूर्वी किंवा पश्चात् साधक नाना

प्रकारचे शब्द ऐकतो. हे नादशब्द व्यक्त व अव्यक्त असे दोन प्रकारचे असतात. ज्या शब्दांना बाहेरच्या कोणत्याही शब्दांची उपमा देता येत नाही, त्यांना अव्यक्त म्हणतात आणि जे शब्द तास घंटेप्रमाणे स्पष्ट स्फुरित होतात त्यांना व्यक्त म्हणतात. हे शब्द वर्णात्मक आणि ध्वन्यात्मक असे नाना प्रकारचे असतात. आघाताशिवाय किंवा उच्चाराशिवाय जे अंतरात स्वत: होतात त्यांना मंगलदायक शब्दब्रम्ह म्हणतात. शब्दब्रम्ह अनाहत ध्वनीचे लक्ष्य करणारे योगी या नादाचे नऊ प्रकार सांगतात. योगशास्त्रात नाद असंख्य प्रकारचे सांगितले आहेत परंतु योगसाधन करणारे यांना नियमित संख्यारूपाने ते अनुभव येतात.

आकाशधारणायस्य व्योमसूक्ष्मं प्रवर्तते.
पश्यते मंडलं सूक्ष्मं घोषश्चास्य प्रवर्तते.
ब्रम्हरध्रंगतेवायौ नादश्चोत्पद्यते घनम्.
शंखध्वनिनिभश्चादौ मध्ये मेघध्वनिर्यथा.
पर्वते व्योम संप्राप्ते ध्वनिरूपत्पद्यते महान्.
घंटादीनां प्रवाद्यानां तत: सिध्दिरदूरत: .

योगसाधनात मन ज्यावेळी आकाशतत्वात जाते त्यावेळी सूक्ष्म आकाशा पासून नाद उत्पन्न होतात. त्यावेळी साधकाला सूक्ष्म शून्यरूप ज्योतीचे दर्शन व शब्द ऐकू येतात. जेव्हा प्राणवायू ब्रम्हरध्रात जातो तेव्हा मेघध्वनी व शंखाचा शब्द ऐकू येतो. अंतराकाशात प्राण गेल्याने हा महान ध्वनी होऊ लागतो, घंटेप्रमाणे वाद्ये वाजू लागतात. हे शब्द योगसिध्दीचे सूचक आहेत. असे होऊ लागले म्हणजे योग सिध्दी दूर नाही असे समजावे.

दिव्य नादाचे प्रकार :

आदौजलधिजीमूत भेरीझर्झरसंभवा: .
मध्येमर्दलशंखोत्या घंटाकाहलजास्तथा .
अंतेतु किंकिणी वंश वीणा भ्रमर नि:स्वना .
इति नानाविधा नादा:श्रूयन्ते देहमध्यगा: .

हे नाद समुद्राच्या गर्जनेप्रमाणें, मेघगर्जनेप्रमाणें, धबधब्याप्रमाणें, गाडीच्या शब्दाप्रमाणें, जळणाऱ्या अग्नीप्रमाणें ऐकू येतात. अथवा भेरी, काहल, दुंदुभि, मार्दल, मृदंग, शंख, घंटा, किंकिणी, झांझार करताल व वंशी, वीणा इत्यादी वाद्यप्रमाणें होतात. अथवा वृषभ, मयूर, भ्रमर, अथवा वृषभ, मयूर, भ्रमर, मधुमक्षिका, झिनझिन, चिनाचिणी आदी पशुपक्षी, कीटपतंगाचे शब्दाप्रमाणें, स्त्रियांचे गीताप्रमाणें किंवा पुष्कळशा लोकांच्या कोलाहलाप्रमाणें घोषाशब्दही ऐकू येतात आणि कधी अव्यक्त ब्रह्म ओंकाराचा ध्वनी ऐकू येतो. यात चित, चिंचिण, घंटा, शंख, वीणा, करताल वंशी, मृदंग भेरी आणि मेघ हे नाद मुख्य आहेत.

दिव्य नादश्रवणाचे फळ :

प्रथमे चिंचिणी गात्रं व्दितीय गात्र भंजनम् .
तृतीय स्वेदन याति चतुर्थ कंपते शिर: ..
पंचम स्त्रवते तालु षष्ठेऽमृत निषेवणम्.
सप्तमे गूढ विज्ञानं परावाचा तथाष्टमे..
अदृश्यं नवमे देहं दिव्यं चक्षुस्तथामलम्.
दशमे परमं ब्रह्म भवेद्ब्रह्मात्मसंनिधौ.

प्रथम चिंचिणानाद प्रकट झाल्याने शरीरात झनझन होते. दुसरा चिंचिण नाद झाल्याने शरीर तुटू लागते. तिसऱ्या घंटानादाने प्रस्वेद होतो. घाम येतो, चवथ्या शंखनादाने मस्तक कापू लागते. पाचव्या तंत्री नादाने तालुपासून अमृत ठिपकते. सहाव्या करताल नादाने अमृताचे आस्वादन होते. सातव्या वंशी नादाने गूढ विषयाचे ज्ञान होते. आठव्या मृदंग नादाने परावाणीचे ज्ञान होते व त्यामुळे वाक्सिध्दी होते. नवव्या भेरी नादाने शरीराची सुंदरता. अदृश्यत्व सिध्दी व आवरणरहित दिव्य दृष्टी प्राप्त होते आणि दहाव्या मेघनादाच्या श्रवणाने साधक समाधीत ब्रह्माशी एकता प्राप्त होऊन ब्रह्मरूप होतो.

नवशब्दान्परित्यज्य ओंकारतु समाश्रयेत्.
ध्यानेनैव सदा योगी पुण्यपापैर्न लिप्यते.
नादकोटि सहस्राणि बिंदुकोटि शतानिच.
सर्वे तत्र लयं यांति ब्रम्हप्रणव नादके.

साधकाने उपरोक्त नऊ नादांचा त्याग करून मेघाप्रमाणे केवळ ध्वनिरूप ओंकाराचाच आश्रय करून राहावे. ओंकार ध्वनी आपोआप झाल्यावर दुसऱ्या कोणत्याही नादात मन लावण्याची आवश्यकता नाही. ओंकाराचे नादरूपाने ध्यान करीत राहिल्याने योगी लोक पापपुण्यांत लिप्त होत नाहीत व मोक्षाला जातात. हजारो कोटी नाद आणि शतकोटी बिंदूरूप ज्योती ही सर्व ब्रम्हरूप ओंकाराच्या नादात लय पावतात.

ओंकारमेघिक् त्याशु योगी ध्वन्यात्मकं मन.
सत्यलोकावधिं प्राप्तुं शक्नुयात्कोत्र संशय:.
कर्मनिष्ठमहात्मनो योगनिष्ठास्तथापरा: .
ओंकाराश्रयान्नूनं देवयानगतिं गता: .
यस्मान्न पुरावृत्तिस्तं लोकं प्राप्तुमीशते..

केवळ माझ्या ध्वनिरूप ओंकाराचा आश्रय करून योगी लोक सत्यलोकाला प्राप्त होतात यात शंका नाही. जे महात्मे लोक वैदिक कर्म, उदगीथ, उपासना परायण अथवा योगपरायण आहेत ते ओंकाराचा आश्रय करून देवयान गतीने मोक्षाला जातात. म्हणून ~~पुनरा~~ पुनरावर्तीरहित अशा लोकांची इच्छा करणारे साधक ओंकाराची उपासना करून मोक्षाला जातात.

....

PSYCHOLOGICAL CORRELATES OF MUSICAL CREATIVITY : A SELECTIVE FOCUS

MANAS RAYCHAUDHURI

Mankind in general and psychologists is particular have long been curious and speculative about the psychological background of creativity in arts. But only during the last twenty years curiosity and speculation have given way to objective studies and controlled observation. A number of these studies have subjected creative artists, musicians and literary persons to empirical personality studies (Barron, 1961, 1963;Cashdan and Welsh, 1966; Cross, Cattell and Butcher, 1967; Drevdahl and cattell, 1958;Eiduson, 1958; Holtzman, Swartz and Thorpe, 1971; MacKinnon, 1964 to name a few) with a view to answer the question : Does an original, exceptional and creative product occur by chance or does it occur as a result of a particular configuration of psychological attributes ? Findings of most of the past personality studies lend positive support to the notion that artistic creativity is related to certain attributes of personality, the intellectual, affective and motivational characteristics, the various background factors of development and milieu, though pointing to wide variations as to the constellation of the said correlates among the creative samples studied by various investigators.

A close scrutiny of the past researches on artistic and musical creativity reveals that most provocative concepts concerning creative persons psychological world have been gleaned from studies of the eminent (Dellas and Gaier, 1970). As early as 1942, Harrower and Cox studied a group of well-known American musicians with the Rorschach ink-blot test and arrived at the finding that "Musicians are much more systematic (in their personality styles) than the artist (painter) suggesting that music is something more than an art, that it is to a degree a science" (Harrower and Cox, 1942). Despite the futile outcome of a number of investigators in this field (as for example, Roe, 1946; Anderson and Munroe, 1948; Nash, 1954) who attempted to identify the characteristic personality structure of the artists, analytically-oriented researchers continued to explore the psycho-dynamic bases of relationship between artistic talent and personality. A Rorschach study conducted by Myden (1959) on a group of highly creative artists, re-affirmed some postulates of Freud and Ernst Kris by showing that creative subjects employ primary processes ultimately led to the integration with the secondary processes without any significant increase of anxiety. The study also indicated that adaptive regression i.e.,

regression in thinking processes without any symptomatic diminution in ego-control, and appreciable absence of repressive mechanism characterized the psyche of the creative artist. Utilizing the Rorschach data, Hersch (1962) was able also to buttress the suggestion that the cognitive functioning of creative person is distinguished by a greater availability of both the relatively mature and relatively primitive processes. This flexibility in thinking processes has also been found with the creatives studied by wild (1965). The special capacity of artist's ego to allow regressive functions to operate—a biphasic regression-progression capacity-- not only indicates artist's superior ego-strength to handle apparently pathological trends, but implies also that he is relatively unimpeded by conflicting forces in the environment, exhibiting sufficiently flexible controls which helped him to win over these conflicts.

In a well-designed personality study Eiduson (1958) also found that it was primarily in their ways of thinking and perceiving that artists exhibited the most marked differences from non-artists. She reports that the artist's thinking "is marked by a great deal of elaborated fantasy; they are able to tolerate ambiguity in perception and also have the ability to loosen

or relax their thinking without accompanying personality disorganization."

The nature of creative artists 'sex role identification has also been examined in a number of studies (Barron, 1963; Hammer, 1964; Mackinnon, 1961; Myden, 1959). It is revealed that sex ambivalence implying an active masculine pattern in the female and a passive feminine pattern of interests in the male distinguishes the creative. That a certain degree of cross-sex identification is related to creativity in both men and women has also been observed by Raychaudhuri (1971). Interpreting the significance of sex ambivalence and bi-sexuality in creativity, Dellas and Gaier (1970) suggest that "though feminine components appear to a greater degree in the creative male personality, it is the blending of th feminine and masculine, the integration of the necessary sensitivity and intuition with purposive action and determination, that is conducive to creativeness."

Despite the agelong tradition of the Indian art artists there have been very few attempts to explore scientifically the psychological make-up of creative artists. The traditional art theories of India adhere to an idealistic notion about art and artists. Musical artists have been considered as "pupils of God"

(Coomarswamy, 1948), singer as a medium communicating between the mortals and the Divinity--the eggect of music is a holy communion with the soul, a kind of <u>yoga</u> (Ratanjankar, 1957).

Of the few experimental studies on artistic person that have been undertaken in this country, Bhattacharyya's (1956, 1960a, 1960b) work on painters revealed that female painters were more emotional with shallow feeling for life as compared to male artists. Other distinctive psychological traits of the painting-group include sociability, confidence, spontaneous reaction to sensory stimulation, social introversion and perceptual facility. The present author's early studies (Raychaudhuri 1961a, 1961b, 1962b, 1964, 1965a, 1965b, 1965c) have shown that artistic persons including musicians studies by him (i) have feelings of depression in their childhood, (ii) have strong oedipal attachment, (iii) are basically dependent, submissive type of person with a low need for physical activity, (iv) have high degree of sensitivity, (v) have vivid fantasy life, a tendency for daydreaming and ability for playful prelogical thinking and (vi) have the capacity to channelize their aggression into sublimated actions. Subsequent studies (Raychaudhuri, 1963) have this to conclude about a group of creative musicians whose personality data were statistically

analyzed : The creative musician is more distinctly marked by his emotional and temperamental characteristics than by other aspects of his personality. A number of developmental factors as well as certain aspects of familial and socio-cultural fieldforces have appeared to be significant and selective in the lives of the studied musicians.

Having these scant research efforts in view, the present study was undertaken to make a fresh probe into the psychological world of gifted musicians of India. Precisely, the study reported here not only aimed at re-examining and re-integrating some fact of the personality information gathered in connection with a past study (Raychaudhuri, 1966), but analyzed and considered also the implications of some other psychological test-data gathered before in the aforesaid study but hetherto unreported.

METHOD

Subjects

In all 30 professional musicians, nominated and selected by a panel of three musicologists and critics, served as subjects (hereafter, S) of the "experimental group". The creative musician, as defined in this study, is a person who is exclusively and gainfully engaged in musical pursuit and is consistently

developing definable musical expressions that are evaluated as original, useful and aesthetic by a reasonable majority of qualified people of our society. Other indications such as, AIR grading, level of socio-economic success and "creativity test" results were also considered.

A comparison group, consisting of 30 subjects drawn from various non-creative vocations involving stereotyped performances such as, minor accounting, clerical office-work, telephone operation etc., served as "non-creative control". The absence of significant creativity of the control Ss was ascertained by referring to indications from "creativity test" results, peer-rating and information concerning interests, hobbies, pastime activities etc.

The Ss belonging to both the groups were matched for age (creative M=43.33, SD=7.95; control =41.85, SD=9.95), sex (equal M:F ratio 22:8), Education (Mean years since leaving High School Creative 4.00; Control 3.8), Marital status (creative single=5 married=25; control single=7 married=23), Intellectual level (Normal-to Superior for both), and language spoken with reasonable facility (Hindi and Bengali for both). As to the speciality classification, 14 of these musicians are vocal-classical, seven instrumental-classical, three romantic-modern, and four other vocals.

Procedure

The data were collected entirely in individual sessions. Two series of psychological measures were used :

Structured and Direct tests of personality and Associated areas

1. The Welsh Figure Preference Test consists of 400 black and white line drawings of varying complexity. On the basis of the S's liking-disliking reaction to these individual drawings, scores were obtained for CF (Conformance Scale), RA (Revised Art Scale), M-F (Male-Female), NP (Neuropsychiatric status) and MV(Movement perception) scales. The indications and implications of these scores are discussed in details in Welsh (1959) and Aiken Jr. (1967) and will be discussed in appropriate section of this paper.

2. Scanning

This experimental measure was used by Child (1965), borrowing a concept from Gardner et al (1959), in his study on aesthetic judgment. The scanner is a person "who has a general alertness to avariety of aspects of the world around him, who notices things unimportant to the dominant interest of the moment as well as things central to it." According to Child's definition, high scanning implies a tendency toward broad deployment of attention so that one is keenly

aware of what is happening outside the main focus of attention and observes changes in background stimulation including trivial elements in the events. The low scanning person has a narrow focusing of attention so that little is noted outside the activity or event one is principally concentrating on, and even there little is noticed except things or elements central to one's interest.

The measure consists of 20 scanning items with a possible range of score between 0 and 20. Significant items will be discussed in the results section. A sample item : Going down a street, I usually notice what the billboards and signs say.

3. <u>Ego Permissiveness measuring scale</u> (Taft, 1967)

A questionnaire inventory measure developed by Professor Ronald Taft of Australia and Indianized by the present author, evaluates nine dimensions of "ego permissiveness" which points to a "personality state in which the ego withdraws some of its authorities, without abdiction, in order to encourage the actualization of pre-conscious and unconscious potentialities" (Taft, 1969). Conceptually, "ego permissiveness"is very much similar to "Adaptive regression", "regression in the service of the ego" or "openness to experience" which have been identified by the previous researchers

as correlates of creativity (Kris, 1952; Schachtel, 1959; Schafer, 1958). The nine sub-scales are as follows :

Peak experiences : represent a merging of the self with the outside world accompanied by such emotions as awe, serenity or ecstasy (17 items)

Dissociated experiences : include experience of, and tolerance for unusual states (12 items)

Openness to inner experience : represents openness to unconscious ideas and positively related to such qualities as intuitiveness and imagination (10 items)

Belief in the supernatural : is related to belief in the reality of supernatural phenomena outside the normal world of logic and perception. (11 items)

Emotional extraversion : underlies such traits as sociability, exhibitionism, impulsivity, aggression and enthusiasm (10items)

Intrinsic arousal : represents a satisfactory integration of the emotions with cognitive achievements and a rejection of the use of external stimulation to maintain arousal (10 items)

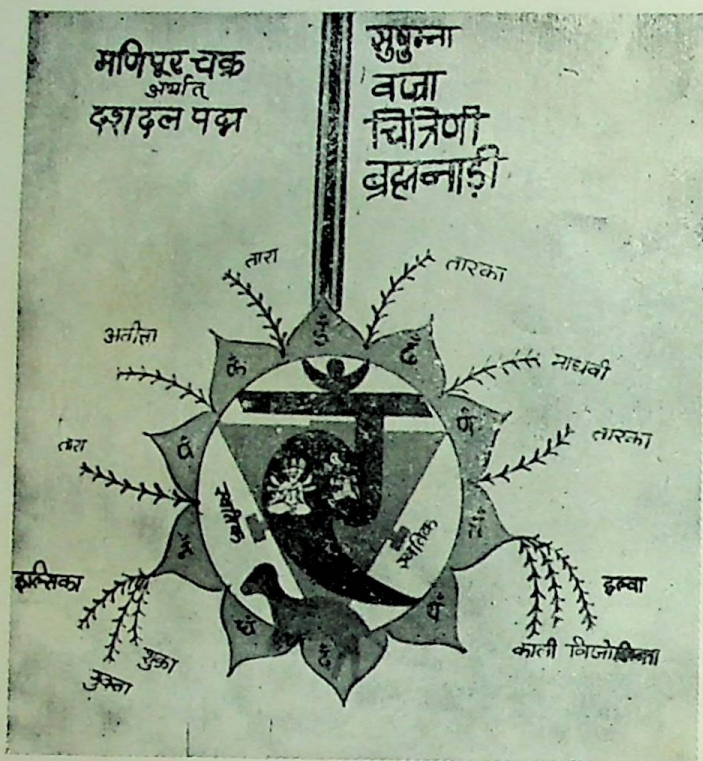
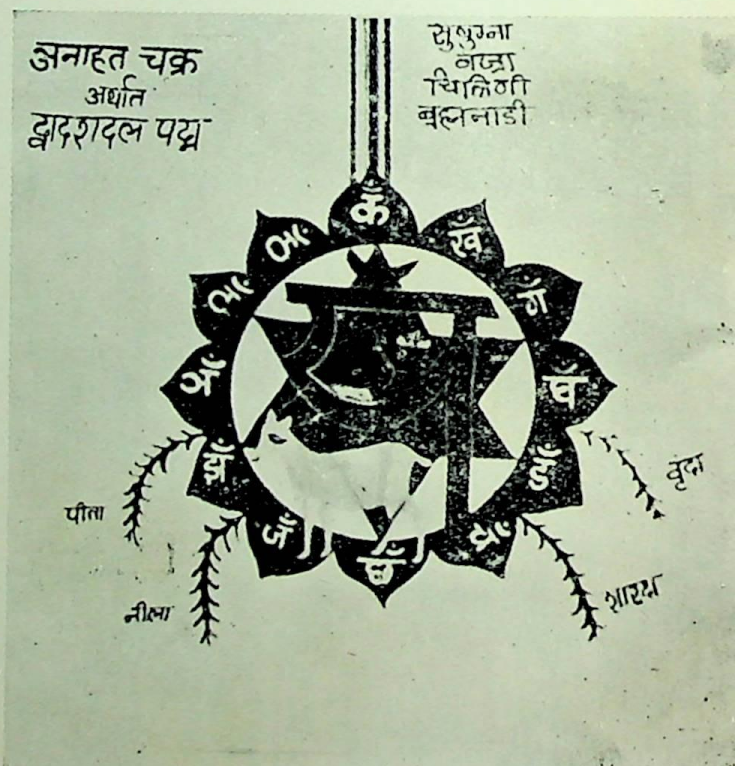
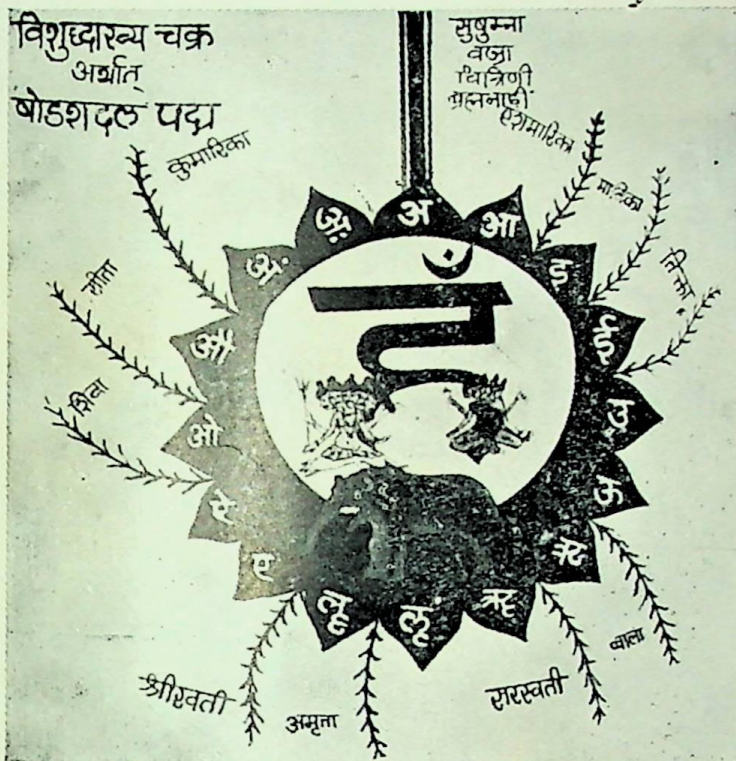
Controlled adaptability : measures qualities associated with maturity, competence and stability (10 items)

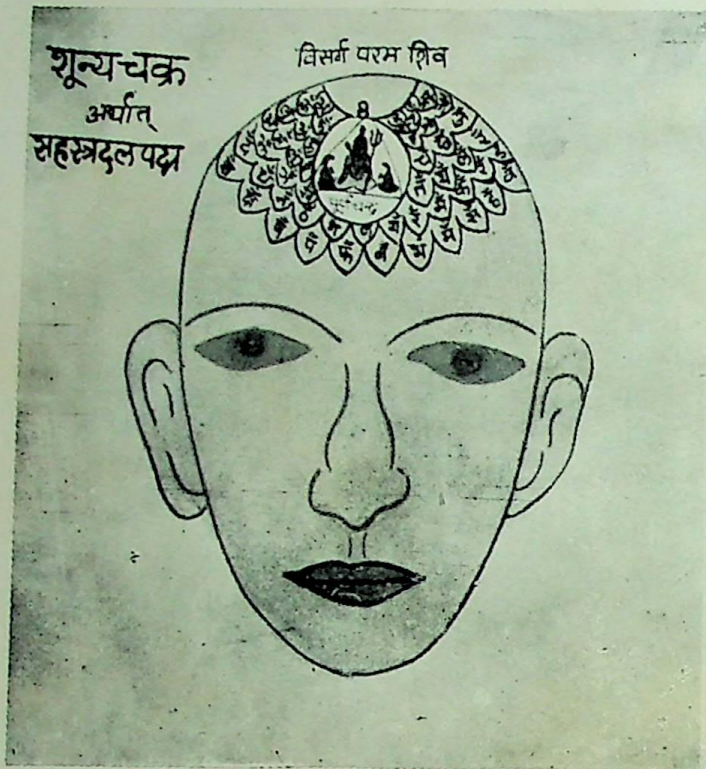
Intellectual control : measures not only cognitive persistence but also variables of creativeness (10 items)

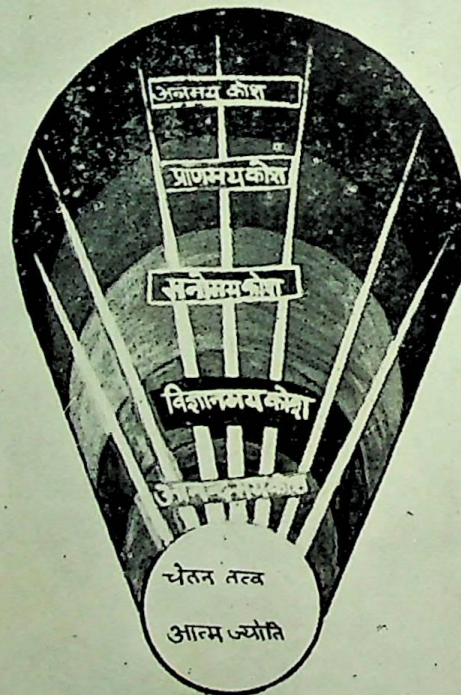
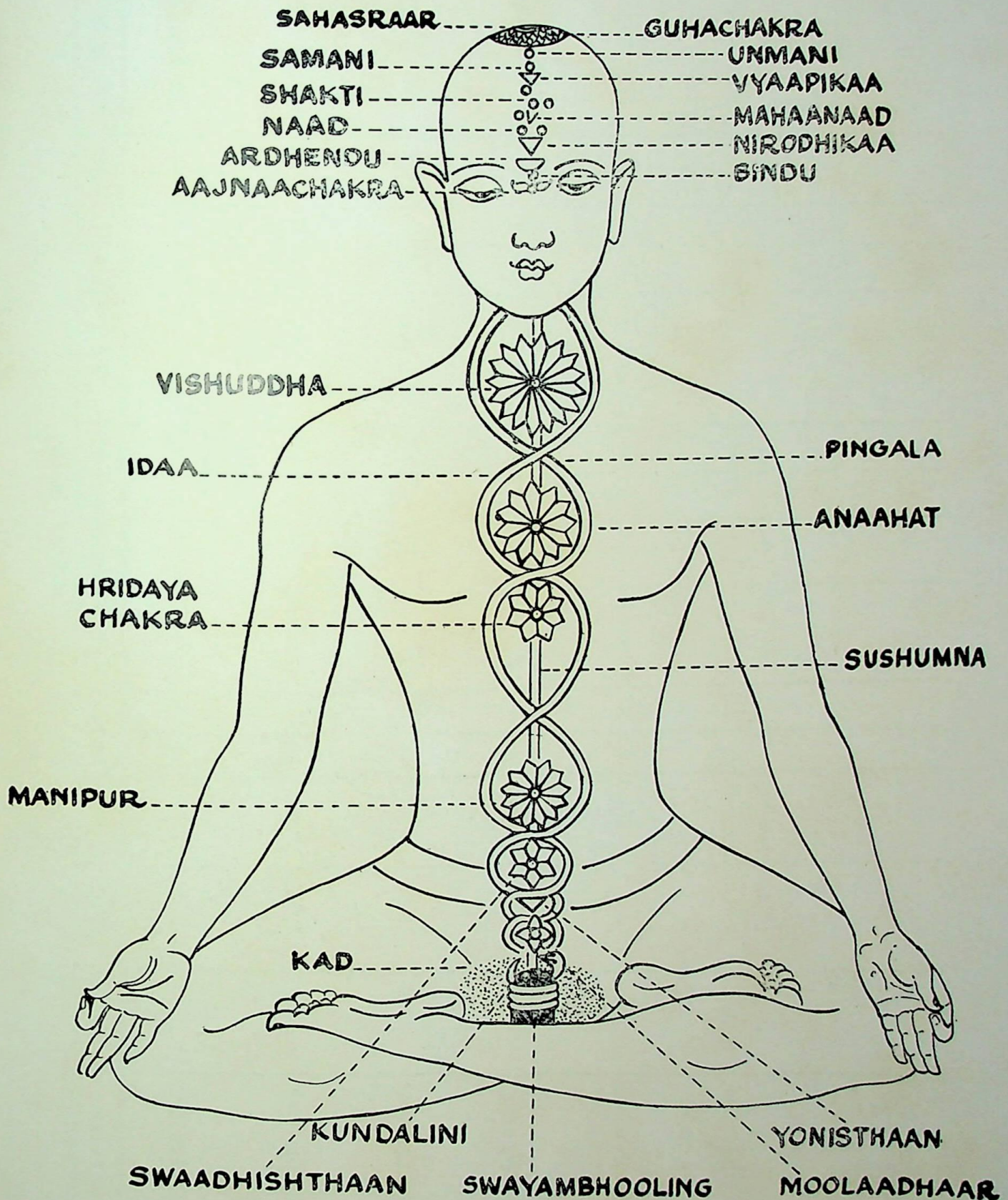
Cognitive regression : implies a great deal of permissiveness for autistic behaviour which is not disintegrative but adaptive. Measures also individual's tendency to enjoy daydreaming not only for one's own pleasure but also for problem-solving (8 items).

The total questionnaire has altogether 88 items with "True-False" devision continuum spread into 5 steps : Definitely true for me (4) Probably true for me (3) Can't decide (2) Probably untrue for me (1), Definitely untrue for me.

1. MULADHARA

2. SVADHISTHANA

3. MANIPUR

4. ANAHATA

5. VISUDDHA

6. AJNA

7. SAHASRARA

8. States of "Consciousness"

THE DIFFERENT YOGIC PLEXUSES

चक्र विज्ञान

क्र.सं.	चक्र का नाम	स्थान	दल	वर्ण	दल अक्षर	तत्त्व	तत्त्वबीज	बीजवाहन	देव तथा देवी	लोक	गुण	यन्त्र	ज्ञानेन्द्रिय	कर्मेन्द्रिय	ध्यान का फल
१.	**मूलाधार चक्र**	गुदा व योनि	४	रक्त	वं शं षं सं	पृथ्वी	लं	ऐरावत हाथी	ब्रह्मा, डाकिनी	भूः	गन्ध	चौकोण	नासिका	गुदा	विद्या, आरोग्य-प्राप्ति
२.	**स्वाधिष्ठान चक्र**	पेडू	६	सिंदूरी	यं रं लं वं भं मं	जल	वं	मकर	विष्णु, राकिनी	भुवः	रस	चक्राकार	रसना	शिश्न	काव्य, योग-प्राप्ति
३.	**मणिपूर चक्र**	नाभि	१०	नील	दं धं नं पं फं डं ढं णं तं थं	अग्नि	रं	मेष	वृद्धरुद्र, लाकिनी	स्वः	रूप	त्रिकोण	नेत्र	चरण	विद्या-सामर्थ्य-प्राप्ति
४.	**अनाहत चक्र**	हृदय	१२	अरुण	चं छं जं झं ञं टं ठं कं खं गं घं ङं	वायु	यं	मृग	ईशानरुद्र, लाकिनी	महः	स्पर्श	षट्कोण	त्वक्	हस्त	ईशत्व, विवेक-प्राप्ति
५.	**विशुद्ध चक्र**	कण्ठ	१६	धूम्र	अं आं इं ईं उं ऊं ऋं ॠं ऌं ॡं एं ऐं ओं औं अं अः	आकाश	हं	हस्ती	पंचवक्त्र, शाकिनी	जनः	शब्द	गोल	कर्ण	वाक्	वक्तृत्व, ज्ञान-प्राप्ति
६.	**आज्ञा चक्र**	भ्रूमध्य	२	श्वेत	हं क्षं	महत्तत्त्व	ॐ	नाद	लिङ्ग	तपः	×	अण्डाकार या लिंगाकार	×	×	वाक्-सिद्धि-प्राप्ति
७.	**सहस्रार**	मस्तिष्क	सहस्र	अवर्ण	अं से क्षं तक	तत्त्वातीत	विसर्ग (परमशिव)	बिन्दु	परब्रह्म	सत्यं	×	निराकार पूर्णचन्द्र	×	×	मुक्ति - प्राप्ति

The details of scoring procedure, their rationale and indications are presented in a Taft's recent paper (1970).

4. <u>The Sensation Seeking Scale</u> (SSS)

Constructed and standardized by Zuckerman and his associates (1964) the scale contains 50 items which measure individual's preference for extremes of sensations (heat, cold, tastes, sounds, etc.) the new and unfamiliar, irregularity as opposed to regularity and routine (bohemianism), enjoyment of danger or thrills, social stimulation, adventure and general excitement. According to Zuckerman and Link (1968), high sensation seeker needs change in his environment, independence from others and probably needs others primarily as an audience to his own performance. On the other hand, the low sensation seeker seems to need order and predictability in his environment. He values social affiliation and is willing to give to or give in to others to maintain stability. The test is divided into 5 subscales :

General SSS --22 items--measures individual's preference for sensitivity to internal sensations or body orientation.

Thrill and Adventure Seeking--14 items-- measures individual's desire to engage in outdoor sports or other activities involving elements of speed or danger.

Experience Seeking--18 items--implies experience for its own sake. Items include wanderlust, exhibitionism in dress and behaviour, the use of hallucinatory drugs, liking for modern arousing music and art and flouting of "irrational" authority.

Disinhibition factor 14 items consists of items which express the hedonistic "playboy philosophy", heavy social drinking, wild parties, swaping and gambling.

Boredom susceptibility--18 items--Males only--indicates a dislike of repetition of experience, routine work, predictable, dull or boring people, a preference for exciting people and a restlessness when things are not changing.

Projective (relatively unstructured and indirect)

tests of Personality

1. The Rorschach Ink-blot test : It is one of the best known projective personality technique capable of revealing the structure of personality. Even when it is used singly it yields personality data regarding individual's cognitive and affective potential, the modes of control, the defense system, the degree of integration and use of endowment, the level of personality development, the fantasy life, the sexual adjustment, the drives and adjustment of the individual to the environment (Eiduson, 1957). Since the test is well-known no attempt is made here to make a fuller description. Klopfer's method of administration was followed.

2. The Thematic Apperception Test (TAT) : The value of this test is well-reconized since this a method for the stimulation, recording and analysis of fantasy. It affords the individual a chance to verbalize in a permissive atmosphere about an object, event or person other than oneself. While constructing stories around the equivocal picture stimuli, the individual mostly utilizes his personal experiences that are revived partly by the immediate perception of the stimuli and partly by the association to these perception. In so doing the individual goes to express the nature of his impulses, defenses, conflicts and intra-psychic dynamism which can be collated into a personality profile by the skilled interpreter. For the present study cards numbering 1,2, 3BM, 4, 5, 7GF, 8BM, 13MF, 17BM, 17GF, 18BM, 20 were used, since these cards appeared to have the most thematic arousal value in our culture.

Analysis of the data : The direct personality test scores were obtained by following the scoring principles available with the respective test manuals. On the basis of

the means and standard deviations of the scores "t" tests for significance of difference between the means were calculated. In the case of projective test data, two clinical psychologists were asked to analyse and interpret independently each individual's responses. Their final task was to judge each set of data as a whole (i.e., global analysis) and to rate them on each item of a specially devised fifty variable, five points rating scale incorporating important postulates culled from the literature on the personality of artists. The full rating scale and its rationale is presented in another report (Raychaudhuri, 1966) and is not repeated here.

FINDINGS AND DISCUSSION

In this section, the results of the statistical analysis of the scores from structured tests will be considered first. Thereafter the results of the global rating scale analysis of the projective personality data will be presented. Finally a selective overview will be attempted to present a configurational structure of the musician's personality as revealed and focussed in this study.

Table 1 reports means and standard deviations of the scores as obtained by the two contrasted groups viz., the creative and non-creative in different structured personality measures that were administered in this study. Observed

statistical differences in this study were noted at atleast .05 level of significance. Any level of significance below .05, as for example .10, though indicating a trend is not accepted, nor reported.

Welsh Figure Preference Test sub-scales :

CF (Conformance scale): Results show that, as compared with the non-musicians, the creative musicians of this study are significantly low in CF i.e., conformance score. It is indicative of musicians'

disagreement or incongruence with general consensus of perceptual preference and selectivity. It also implies a degree of independence in perceptual judgement.

RA (Art Scale): Since the liking for the RA scale figures indicate a tolerance of, and preference for perceptual ambiguity and complexity, the results indicate creative musicians ' preference for an tolerance of perceptual ambiguity via-a-vis lack of such tolerance among the non-creatives.

M-F (Male-Female) Scale : It is seen that the musicians of this study have greater cross-sex identification and sex-ambivalence than the non-creative normals.

NP (Neuropsychiatric) Scale : While there have been endless speculations on a possible relationship between creativity and psychopathology, the NP scale scores of the musicians bear no empirical evidence in favour of this supposed notion. There is no significance of difference between the neuropsychiatric scores obtained by the two compared groups.

MV (Movement perception) Scale : Creative musicians are significantly higher in movement perception preference score than the non-creative Ss. It is hypothesized that perception of kinetic quality in a figure which is static i.e., kinesthetic projection implies an imaginal process with relatively free access to fantasy activities. It is also indicative of empathic capacity and can be regarded as a tendency toward intra-psychic living rather than toward the world outside themselves (Rorschach, 1942).

Scanning : The creative musicians have higher scanning abilities than the non-creative controls. As suggested by Child (1965) this capacity is closely related to adequacy of attention involving an ability to attend simultaneously to various aspects of art's stimulus value. Artistic growth, it may be recalled, seems to demand a scanning ability since objects of art are constantly present as a part of one's environment from early childhood but may be reacted to solely for their practical significance except by the scanner (Child,1965).

Ego Permissiveness : The comparison between the two groups on Ego permissiveness Scale revealed significance of difference in the following sub-scales : Peak Experience, Openness to inner experiences, Belief in the supernatural, Intrinsic arousal and Cognitive regression. An overall comparison in total Ego Permissiveness (Summation of Scales 1,2,3,4,6) also indicate a significant difference between the creative and non-creative groups. In all these differences, the musicians appear higher in ego permissiveness than the non-musicians. These differences, when viewed closely, suggest that the musicians are expressive (rather than controlled), self-actualizing and humanistic type of person. They have openness to unconscious ideas and qualities of intuituveness with a strong belief in the supernatural. They have a satis-

factory integration of the emotions with cognitive achievements and rejection of the use of external stimulation to maintain arousal. Their characteristic cognitive regression is in other words controlled regression in the service of the ego.

Sensation Seeking Scale : Only two significant factor differences emerged when the Sensation Seeking Scale scores of the creative and non-creative groups were compared. They are General Sensation seekingness and Experience Seeking needs. Musicians, as compared to the non-musicians, have greater preference for extremes of sensation, the new and unfamiliar, general excitement and experience for its own sake.

Rating Scale Analysis of Projective Personality Data

It may be recalled that the projective personality test data were subjected to the evaluation by two clinical psychologists on a fifty variable rating scale. The rating and its subsequent statistical examination has given credence to the fact that there are a number of attributes which all the studied creative musicians share. While enumerating the central tendencies, the impersonality of the abstracted data tends to blot out the dispersions and distinctive individuality of every subject which is no less real than the group characteristics and the "statistical approach approximates every one and resembles no one". But probably there is another logical approach to the

identification of representative qualities which may not wholly be shared by each and every single member of the group.

The quantiative analysis of the personality data, as reported in Table 2, indicates that the studied creative musicians can be distinguished from the non-creative Ss on the basis of a number of differential personality attributes. As a group, musicians seemed to have sufficient emotional breadth, diversification and flexibility. They are affected not only by their own needs, wishes and mood-tone shifts, but by others' feelings also (empathy). They seek intimate interpersonal relationships, though they generally suffer from depression and conceive of the environment as cold, unfriendly and hostile. Also characteristic is their exhibitionistic devices, such as, dramatization to derive narcissistic satisfcation. There are definite evidences of the musicians' attempt to avoid overt outlet of primitive impulses and to sublimate aggression in socialized expressions. They feel challenged by frustration and anxietyinducing situations rather than being overpowered and crushed.

On the cognitive-thinking plane, the study has identified a number of features distinctive of the musical group. They seemed to prefer rich and variegated fantasy within realistic bounds. Their thinking and expressions are characterized by a radical departure from the usual,

structured and obvious. They have characteristic plasticity and mobility of thinking processes which appear regressive and progressive with greater availability of primary material, without symptomatic diminution in ego-control. The perceptual organization of this creative group is marked by a tolerance of and seeking for perceptual ambiguity, complexity and phenomenal imbalance. Musicians prefer activities and situations that are more allowing of individualistic ways of handling, self expression and utilization of personal resources. Also the musicians have hightened resposivity to sense-data and have an independent locus of evaluation and judgement.

Regarding the motivational attributes, the musicians seemed to possess strong ego-involvement, conflict, determination and convictions in work. They do not accept parental ideals to set their vocational goals. Apart from the curiosity drive, the musicians seemed to have a strong need to experience environment in an individualized way. This component seems to crystalize the emergence of a "creativity motive" in the musical person which implies a drive for self-actualization and narcissistic satisfaction in promoting all achievements.

AN OVERVIEW AND CONCLUSIONS

An overview of the psychological nature of musically creative person as revealed in this investigation calls our

attention to a number of inter-relations and functional clustering of the findings derived from two sides viz., direct approaches of personality inventories and projective approach of other tests. We shall now attempt to stake out these clusters for considerations.

<u>Affective dynamics, Experiential needs and Receptivity</u>

The affective dynamics of the musician is largely determined by the degree of permeability of the boundary which differentiates the inner self from the external world; the greater the permeability of the outer boundary, freer the interplay between the person and his immediate environment. The musicians have exhibited distinctly greater permeability of self-object boundary and have manifested more responsivity to affectively exciting stimuli from outside by being strongly impressed, provoked and stirred up by other's feeling.

From the available data it can be inferred that there is enough evidence to support the notion that musicians have a ready understanding of their immediate surrounding and the people with whom they live. Moreover he is sensitive to the affectional needs of others and often tends to provide emotional stimulations as far as practicable. This sensitivity to and awareness of the feelings of others are so characteristic that it is suggestive of some underlying relationship between musical creativity and social sensitivity. Linked with this is the ego

permissive variable of "peak experience" which represents a fusion of the self with the outside world by such emotions as awe, serenity or ecstasy.

These social adaptive functions in the affective life of the musician do not in any way obliterate the fact that he is no less responsive to the "promptings from within". It has been found that the musicians are high scorer in the scale for measuring the "openness to inner experience". As a matter fact the data indicate musicians" distinctive orientation toward both the external and internal reality seems to provide an interesting vital balance between the internal needs (self) and external situation (society, audience, music critic etc.).

The creative musicians are not only "experience seekers" but have also exceptional awareness for sense-experience data with greater intensity and extensity. This orientation must derive support from a discriminating function of the ego which distinguishes the creator from an amorphous sponge soaking up everything in sight regardless of worth. Besides these factors, the musicians have also shown sensitivity to affective dysphoria and euphoria. This fine awareness for alternating sense of buoyancy-welbeing and dissatisfaction-ill-being may be regarded as related to artistic predisposition for capturing the delicate nuances of a mood or mental experience.

Further, unlike the creative persons in other fields, the musicians do not seek to control emotion by way of intellectualization. The primary goal of intellectualization is to bring instinctual impulsive processes into close relationship with ideational contents so as to make them accessible to consciousness and amenable to control. Therefore it seems that intellectualization of affective processes serve as a defence against the need for affection and approval. No. such defensive role has been found to assume by our musicians. They exhibit greater flexibility and elaborations in the affective sphere. Their emotional expressions do not particularly find outlet in one or two specific channels with limited context, but the sufficient breadth of their emotional involvement gears them to express in a number of possible ends and means, musical expression of course, being a major outlet.

Impulsive life and Control

Creative musicians of this study have a mature ego function which does not allow to express openly hostile, explosive, aggressive and sexually charged impulses. The over-all picture is indicative of an appropriate inner control necessary for directing impulse expressions. Although these Ss find their environment cold, hostile and unfriendly, still they inhibit expression of their impulses and avoid open conflict with social reality.

We are well aware of the relative social indifference, lack of economic patronage by the society and non-supporting attitude of the general audience toward the creative musicians. It is highly plausible that besides the mature ego organization, the sublimational activity inherent in music helps the musicians to maintain an intra-psychic harmony between the opposed tendencies and adjustment. Conceptually we can relate these findings to the fact that some of these aggressive drives and energies may be transformed by the artist into symbolic forms in which the hostility and instinctual impulsiveness are destroyed.

The symbolization not only yields redirection of original aggressive aims of the musicians, but tends to reduce the freefloating anxieties and tensions. Fantasy and belief in the supernatural often acts as a safety-valve to provide an opportunity for neutralizing the emotional pressure associated with anxieties. This expectation is borne out by our data.

In line with the previous fidings, the present data indicate high association between creativity and femininity. It is hypothesized that the creative male musician is more prone to mould his own ego after the fashion of mother. It can be said that although these creative men did not deny expression of this more feminine aspect of their personality, which led them to recognize impulses

and interests as more characteristic of women, the data did not indicate that they were effiminate or homosexuals. But inspite of this trends of bisexuality and cross-sex-identification, our musicians do not appear to suffer from conflict over activity-passivity. And this finding certainly lends support to Dellas and Gaier's (1970) suggestion that the integration of the feminine characteristics of sensitivity and intuition with masculine purposivity and determination for action is a signigicant correlate of creativeness.

<u>Perceptual openness, selectivity and ideational equipment</u>

Perceptual openness, which is regarded as individual's greater awareness of and receptiveness to both the outer world and inner self, has found to be of significance among the creative musicians. Their perceptual selectivity refers to their differential reactivity to the stimulating situations. With regard to the ideational equipment, musicians are both regressive and progressive and exhibit greater utilization of primary processes. The ego of the creative Ss has a special ability to relax and forego reality principle in a controlled way in order to facilitate the emergence of unconscious instinctive material that is more original, evocative and affective than the realistic one. Our musicians have greater availability of both relatively mature and

relatively primitive processes. This extensive use of the primitive functioning by the musicians can be attributed to optimal, flexible controls which were readily accessible and facilitated quick return to secondary processes which are more orderly, realistic-oriented and rational. By contrast, the non-creative Ss, has rigid, self-limiting controls, This so-called primitive functioning of the creative Ss has to be differentiated from the primitivity of the pathological groups as for example, the schizophrenics. The schizophrenics lack in ego controls and tend to establish a syncretic relationship between the self and the outer world. A detailed analysis of the mechanism is provoded in another report (Raychaudhuri, 1966).

<u>Narcissistic omnipotence</u> : Popular wisdom has called our attention to the highly egoistic, narcissistic personality involvement in any form of creative work. To be creative, one needs to focus his attention intently upon his own resources which ultimately become an object of immense love and gratification because it serves to achieve narcissistic omnipotence <u>via</u> creative success. The narcissistic strivings of a creator must be differentiated from infantile or pathological form of narcissism. Our musicians hightened ego-involvement in in the work, their self-extension to creative work and their libidinal satisfaction derived out of exhibitionistic

display of their abilities lay the cornerstone for the creative personality which seeks to fulfil narcissistic goals via exhibitionistic efforts. A majority of our musicians are performing artists appearing on the stage and derive satisfaction by exercising their musical power.

Motivational determinants : It is observed that the musicians are propelled by a curiosity and inquisitveness to experience phenomena (both internal and external) and because of their self-expressive and self-actualizing needs they tend to reflect and express the personal experiences, which are their intra-psychic resources, in a number of ways and means. One can think of various levels of actualization of the self and in the case of our creative artists it seems to center on activities that offer the greatest opportunities for utilization of personal experiences and resources. It is technically called "creativity motive" which implies an eagerness of the individual to interact with his surrounding to experience his fullest perceptual, cognitive and pressive potentiales. Further, these creative persons value work primarily not as a means of achieving money or fame, but as a medium which permits experience of environment in an individualized, flexible and manipulative way. The non-creative group has, in contrast, a tendency to defend against the environment to maximize predictability,

comprehensibility and stability.

Limitations of this study

1. The first apparent limitation of this study has been imposed by relatively limited number of creative Ss that was studied.

2. Another related limitation about the sampled Ss is that they belong to almost a single language group and residing in one geographical area.

3. The studied sample included only those creative musicians who were willing to furnish personality data for scientific scrutiny. The so-called "volunteer error effect", which underlies the proposition that more adjusted, mature and psychologically poised Ss generally tend to volunteer as subjects in psychological investigations, might have coloured our findings.

   It is admitted here that if we could have studied all the musicians from diverse eco-cultural groupings, a better claim in favour of the results of this research could have been made.

4. Certain considerations apply to the methodological limitations inherent in the rating-scale approach in which a selective focus is made on the creative personality. We are not very sure whether they cover the entire area of the musical creativity.

5. Also the rating of only two "clinicians" may be viewed as another aspect of limitation. Whether the results reached here could still be obtained with greater number of "evaluators" is a question that can only be answered through future studies.

All the findings and generalizations made in this report pertain to the sample studied only.

Table 1 : Means and Standard Deviations of Structured Personali Test Data for the Studied Groups

Tests	Creative musician M	Creative musician SD	Non-Creative M	Non-Creative SD	Statistical Difference
WFPT					
CF scale	14.00	4.50	26.33	6.66	Sig.
RA scale	41.33	6.66	20.00	8.60	Sig.
MF scale	29.76	5.30	16.30	7.00	Sig.
NP scale	20.10	7.33	18.33	6.33	Insig.
MV scale	40.33	5.00	30.00	5.33	Sig.
Scanning	10.33	3.33	4.66	2.00	Sig.
Ego Permissiveness					
1. Peak Experiences	30.00	6.00	20.00	7.00	Sig.
2. Dissociated Expr.	20.00	8.00	17.00	9.00	Insig.
3. Openness to inner Experience	32.00	7.00	24.00	8.00	Sig.
4. Belief in the Supernatural	31.00	6.00	21.00	7.00	Sig.
5. Emotional extra-version	18.33	6.33	20.00	7.00	Insig.
6. Intrinsic arousal	23.00	5.00	17.00	6.00	Sig.
7. Controlled Adaptability	18.66	5.33	19.00	5.00	Insig.
8. Intellectual control	20.00	6.33	22.00	6.00	Insig.
9. Cognitive regression	29.00	6.00	19.33	5.66	Sig.
Ego Permissivenes Total(1,2,3,4,6)	134.66	20.00	98.66	18.00	Sig.
Sensation Seeking Scale					
1. Gen.Sensation(SSS)	16.00	6.00	9.00	5.66	Sig.
2. Thrill & Adven.(TA)	6.00	3.66	8.00	4.00	Insig.
3. Experience Seeking (ES)	13.00	4.33	8.00	5.00	Sig.
4. Disinhibition(Di)	5.00	3.33	6.00	3.00	Insig.
5. Boredom Susceptibility (BS)	10.33	5.00	8.00	6.00	Insig.

Sig.=Significant at or beyond the 5% level of confidence

Table 2:: Discriminating Personality variables
(Musicians vs. Controls)

	P level
A. Affective-temperamental characteristic :	
3. Shows signs of sublimation rather than overt expressions of primitive and unconscious impulses	.05
4. Seeks intimate interpersonal relationship	.05
7. Is strongly affected by others feelings	.001
9. Can dramatize in a way to induce feelings in others	.05
13. Is usually affected by own inner needs, wishes and mood-tone shifts	.01
23. Has exhibitionistic needs to derive narcissistic satisfaction	.05
28. Feels challanged by frustration and anxiety-inducing situations rather than being over-powered and crushed	.05
29. Tends to channel aggression into socially accepted and sublimated activities	.01
36. Has marked trends of bi-sexuality	.05
38. Conceives environment to be cold, hostile and unfriendly	.01
40. Has sufficient emotional breadth, diversification and flexibility	.001
46. Has signs of depression	.02
B. Cognitive and intellectual capacities :	
6. Prefers rich and variegated fantasy keeping an eye on relistic bounds	.02
10. Has a readiness to depart radically in expression and thinking from the usual, obvious and structured	.05
11. Prefers activities and situations which are more allowing of individualistic ways of handling, self-expression and utilization of personal resources	.01
12. Has ready responsivity to sensory experience data	.02
15. Regression appears to be a part of the thinking process without symptomatic diminution in ego control	.01
20. Shows greater availability and utilization of primary processes in imaginative activity	.02
27. Displays plasticity rather than rigidity and constriction in thinking	.05
41. Has an independent and internal locus of judgment and evaluation	.01
48. Is characterized by a tolerance for, and seeking of perceptual ambiguity, complexity and phenomenal imbalance	.02
50. Shows intrapsychic mobility in terms of regression and progression	.01

Contd.... Table-2 :

C. Motivational Attributes :

2. Accepts parental ideals to set own goals≠	.01
16. Shows a strong undercurrent of narcissistic satisfaction tone in promoting all achievement	.05
25. Has strong determination and convictions regarding work in general	.01
33. Expresses strong ego-involvment and conflict in work	.01
34. Value system strongly determined by prevailing cultural standards ≠	.01
44. Work is mainly determined by a need to experience environment in individualized ways	.05
49. Work seems to be determined by a distinctive inquisitivenes and curiosity	.05

≠ reverse scored

A note on "P" level :

The "p level" or level of significance implies or points to the confidence with which an experimenter rejects or retains a null hypothesis. Whether a difference is to be taken - statistically, significant or not, Garrett says (Garrett 1967), depends upon the probability that the given difference could have arisen "by chance". "Usually a difference is marked "significant" when the gap between two sample means points to or signifies a real difference between the parameters of the populations from which the samples were drawn. Before a judgement of significant or non-significant is made, some critical points must be designated along the probability scale which will serve to seperate these two judgement categories". (Garrett 1967). In .05 level it is implied that not more than five times in 100 trials a difference of the particular size arise if the true a differences were zero (i.e., if $M_{pop1} - M_{pop2}$ -0.00). The .01 level of significance is more exacting than the .05 level.

Garrett, H.E. Statistics in Psychology and Education. Fourth

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Ka-Ro Ink-blot test. Card II
(Courtesy, Prof. Kataguchi, Tokyo)

THE THEMATIC APPERCEPTION TEST (TAT)

INHERITANCE OF MUSICAL ABILITY

S. B. GOGATE.

Every generation has seen great musicians. Many of these musicians have shown their talent at an early age. However, musicians and scientists have not been able to explain the origin of this talent. Is it the flowering of some remarkable hereditary endowment ? Or is it the result of some unusual early environment and intensive training ? Both the views has had their advocates.

In old times, people believed that the inheritance of musical talent could be proved by pointing out the pedigreas of talented familes. But this view is not accepted these days. and as such it is necessary to examine both these views.

Amram Scheinfeld[1] studied musical histories and backgrounds of singers, pianists, violinists and conductors. He found that in almost every case, musical talent expressed itself at an early age. Evidence from the past and present shows clearly that great achievement in music is almost invariably correlated with an extremely early start. Now the question is this : What accounts for the early start ? Is it an unusual musical environment ? Is it an unusual musical heredity ? Or is it a special combination of both ?

Majority of the talented musicians reported that they had talented parents, one or both. Yet quite a number reported

no talent in either parent: among them was Toscanini, a famous musician. Similarly, the difference in the family background, or in the presence of talent in parents did not seem to have anything to do with the musical quality displayed by the individuals.

Lack of direct and consistent correlation between musical achievement and background strongly suggests that musical talent does not arise from any unusal home environment, Similarly, that a highly musical environment alone can not produce talent, was shown by Amram Scheinfeld in his study. In this study some children were reported to be 'without talent' by their parents and most of them having no unusual talent despite all opportunity given to them.

But if environment is not the determining factor in musical talent, can we say that heredity is? Lot of evidence is available to show this and let us consider this evidence first.

A. Girdano and E. Guli[2], in a study in 1960, concluded that statistical data obtained from genealogies of six families with a large number of musically talented members support the position that musical talent is inherited and that the genetic transmission of musical aptitude is due to a monomeric autosomic dominating characteristic.

Herbert Wing[3] undertook a study of musical ability among children. He concluded that 'Nature is far more important than Nurture'. Wing offered the following as support to his

stand.

a) 11 Year old children who scored in the lowest quartile the Wing Musical Aptitude Test took music lessons as commonly as those in the highest quartile;

b) Test scores continued to climb for some time after the musical lessons ceased.

c) Wing scores of children, tested again after five years correlated about 9 irrespective of the fact whether the children had taken musical lessons or not.

d) High Testing children did as well as on unfamiliar music items as on the more familiar items.

e) Having two musical parents was associated with higher test scores than having only one such parent.

Seashore[4] in his studies in 1940 concluded that superior musical talent was determined in a large measure by superior musical heredity.

A. Schank[5] in his studies in 1936 observed that descendents of George Melchior Linuenberger, a Chormeister exhibited innate musical ability in each of six generations and in every family of each generation.

C. S. Terry[6] studied the origin of the family of Bach musicians. Johann Sabastin Bach's ascendants and descendents were studied. Seven pedigree tables were prepared. It was found that in the 229 individuals of different branches

representing 14 generations from 1561 to 1929, the number of male professional musicians showed an increase in each generation; 0-1-3-3-10-18-23. However, the musical talent decreased in the eighth generation and suddenly disappeared in the nineth.

Though the facts brought out by the abovementioned studies appear to be significant, a biological basis is necessary to prove that musical talent is indeed inherited. We must be able to isolate constitutional traits or capacities which would make musical talent possible and we must be able to prove that these traits conceivably arise through the action or inference of specific genes.

Carl E. Seashore, with the help of his tests, considers the sense of pitch, time, intensity, harmony, rhythm and tonal memory as components of musical aptitude. In early thirties J.A. Mjoen had considered twenty traits basic to musical ability, some of them being pitch discrimination, tune memory, musical imagination, emotional musical reaction etc. We shall, however, stick to Seashore's analysis, it being recent. Seashore constructed tests for each of the senses to discover the extent to which they were present and to which they could be cultivated. Seashore and others have been able to arrive at the following conclussions[8] after administering these tests to thousands of individuals in the United States.

1. Primary Senses necessary for musical aptitude appear to have constitutional basis.

2. Each sense is present independently of others.
3. Training can develop any of these senses only to the degree that the capacity is inherent.
4. At ten, a child's future musical performance can be determined and at sixteen an individual is musically set.

Traits constituting musical aptitude have been studied independently. A number of studies suggest that absolute pitch, musical memory, tune deafness, talent of composition etc. are inherited. But, aptitude does not necessarily imply true talent. A person may have all the traits yet may not be a talented one. However, aptitude is primary and essential equipment of the musician. He can develop technique necessary for real talent with the help of aptitude.

What is the biological basis of inheritance of musical aptitude? It is assumed that there are specific genes for each of the senses that comprise musical aptitude and that there also exist a few dominent 'Key' genes which make the transmission of talent possible.

There is lot of evidence to support the above view. To quote some :

M.J. Brown studied a family of musicians and found that two musical parents had seven children, all musically talented.

H. Koch and Mjoen observed that if both the parents

and four grand parents are positively (or negatively) musical all the children are positively (or negatively) musical. If one parent is positively musical and the other negatively, half the children are positively musical.

However, there are some instances to show how remarkable talent crops out in an individual neither of whose parents was talented and has then not reappeared in that individuals' children. Toscamini, one of the greatest musicians belong to this catagory.

Of equal interest are the illustrations where children of musically talented fathers and mothers, despite having an intensly musical environment, did not show any musical talent. While a favourable environment is essential for the development of musical talent it can not create talent.

On the other hand, while an unfavourable environment can suppress musical talent, there are many instances of great musicians who have come up despite unfavourable environment. Leonard Bernstein, though had all the talent, was not aware of it due to a negative environment.

The detrimental effect of environment is very well seen in the expression of musical talent in women. Though we have quite a good number of women singers, we hardly have any women instrumentalists. The biological make-up of women, particularly their internal biochemical environment, is also a contributing factor.

More accurate knowledge of heredity's role in voice has come through the use of voice prints developed by Bell Telephone Laboratory. It has been observed that the basic factors contributing to voice are governed in their development by heredity.

Intelligence is supposed to be innate or influenced by heredity factors. However, intellectually defective have also been found to be musically talented. Anne Anastasi and R.F.Level have reported a case of an adult male mentally defective (I.Q. 67) and yet musically talented. Ray Moore in studying the relationship of intelligence to cretivity, however, observes that 'Intelligence is an essential factor in artistic creativity; but apparantly not influential above a certain point which may be an I.Q. of 120.

As regards culture and musical talent, Edwin Gordon observes that "Although it is apparent that there is a sufficient number of culturally disadvantaged musically talented students who can be objectively indentified for purpose of musical instruction, extra-musical factors may specifically affect the degree to which these students will necessarily achieve in music".

Similarly, no particular race has been found to be more musically talented than other.

CONCLUSION:

All the finer shades of the problem can be argued indefinitely and yet we shall have to

conclude that although,

> Musical Talent follows the same pattern of development as do many other traits, with heredity as its basis, what is inherited is not musical talent but talent susceptibility. A favourable environment turns it into talent.

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PSYCHOANALYSIS & CREATIVITY: WITH SPECIAL RECERENCE TO MUSICAL CREATIVITY.

Somnath Bhattacharyya.

The fascinating topic of creativity has been studied by many generations of psychoanalysts, Psychoanalytically oriented psychologists and of course by academic psychologists.

The psychoanalysts and the psychoanalytically oriented psychologists have concentrated on the manifest personality characteristics and on the psychodynamics behind the creative urge. Psychoanalysis has born in the therapist's chamber. The first psychoanalyst, Sigmund Freud, developed (during 1887 to 1897) this method for treating mental disceases. Today, this technique is described as <u>Classical Psychoanalysis</u>. Its main tool, free association, is the patient's spontaneous narrations about everything that comes to his conscious mind. Freud encouraged his patients to talk about themselves freely, frankly and elaborately, believing that a person's "inner psychological world was ultimately determined by objective causes that rested in (their) past" (Heinz Ansbacher in his introduction to Adler's <u>Problems of Neurosis</u>, 1956.) Gradually, this psychonalysis as a therapeutic procedure also gained the

status of a method of scientific investigation in the hands of Freud (& post - Freudians) when he began to formulate his genetic, dynamic, economic, structural, topographical, biological and adaptational propositions about the working of the mind. It has now become a "system" of scientific psychology that attempts to explain human behavior, both normal and paranormal, in terms of these various propositions. Since Freud, many other worker in the field have modified, discarded and added to his metapsychological concepts. However, each group of post Freudians has sought to explain human behavior in terms of forces that can be brodly defined, for our purpose, as motives, drives & urges. Thus the psychonalytic explanation of creativity is essentially an attempt to identify the hidden motive in the creative personality that motivates him to create.

This approach may sound restricted. Roychaudhuri (1966) says "These (psychoanalytic) theoretical approaches have been one-sided. Of the multiple facts of creative life, these theorits have generally seized on only one and treated it as decisive and of cardinal importance" (F 31). However, such is the psycho-analytic trend.

Among the psychoanalysts, opinions and findings about the creative personality is seen to vary according to the worker's affiliation & area of interest. Freud has seen creativity as the outcome of "sublimation" (See Appendix) of the instincts, especially the pre-genital libidinal drives (Freud, 1908a, 1908b, 1910, 1911, 1948a, 1948b). The Freudian view has been maintained (with or without some modifications of the construct) by Brill (1931), Fenichel (1945,1946), Abraham (1949), Bychowski (1951), Gustin (1955), Kohut (1957) and others. The positions of Alexander (1908), Bergler (1945,1947) & the like are somewhat removed from Freud.

Another group feels that creativity is the result, in a sense, of sublimation, all right, but not of the sublimation of the libidinal drives but mainly of the destructive impulses. "The governing principle of art "is, according to this group, "the principle of restitution" for the aggressive impulses (Fairbairn 1938), To this group belong Klein (1948,1949), Sharpe (1930), Grotjahn (1957), Lee (1947,1950) Levey (1939,1940) Rickman (1940) and many others.

Another group tries to explain creativity as a sort of compensation phenomenon. To them, it is the actualization of an unconscious urge to compensate for a real or imaginary inferiority. Adler (1964) is the

champion here.

Over and above these experts, Rank (1932) and his followers see in creativity the expression of the urge to immortalize the self, and Jung (1928,1946) has linked different art forms to his different "personality types".

However, the above is but one way of classifying the views of psychoanalysts and psychoanalytical theorists. Some other authors have offered other classification schemes also. The total number of explanation attempts would reach a very big figure indeed. In the present paper samples of the views of some psychoanalysts and psychoanalytically oriented psychologists have been considered.

Creativity as a 'Sublimation' :

Freud has seen creativity apparently from more than a single angle. However, at a deeper level of synthesis, these apparently different views converge into one single beam of wisdom that exposes creativity as the end result of sublimation of preginital libidinal (and aggressive) impulses. First, according to Freud (1908a) creative activity is comparable to day-dreaming. What play is to the child, day-dreaming is to the adult. The adult, in his phantasy, subjectively arranges the reality after his own linking, as the child

does in his play. At the root of this felt urge to day-dream (that is, to re-arrange the reality) lies unsatisfied wishes. As it is, the reality is not totally likeable. At the same time, the desired alterations could not be actually done because the original desires themselves were essentially anti-social, shameful and hence considered unworthy of expression by the ego, that sane, sensible and realistic child of the psyche. Fulfilment of these wishes, as such and straightway, would have produced some pleasure, no doubt, to the instinctual psyche (the "id"), but it would, at the same time, have produced much pain to the ego, much more pain than pleasure. So, the hedonistic and calculating ego decides in favour of non-fulfilment of such types of wishes but arranges for keeping them in abeyance. This is "repression". But repression does not mean obliteration. In fact such wishes (or for that matter, any wish) can never be nullified. They just remain in a state of suspended animation. When some current happenings of life stir up this anti-social wish-cluster, the person creates, in phantasy, a situation for him where this wish-group would get some fulfilment. Hence day dreaming.

Thus day-dreaming is actually a creative activity. But one who has the talent can create not only in

phantasy but also in reality. Whereas a neurotic can indulge in day-dreaming and day-dreaming alone, the creative genius, because of his special gifts, discovers his "way back from phantasy to reality - with his special gifts, he moulds his phantasies into a new reality and others regard them as valuable reflections of actual life". (Freud 1908a). This ability for the construction of the new reality is the essence of the artistic genius. It is this cloak of novelty that not only safeguards the creater from the pain and humility of the fulfilment of the bad wish but provides him also with glorified acceptance. At the same time the original anti-social wish derives its satisfaction because the newly created situation is symbolically the same as the one sought for by the owner in the early days of his life.

The main point to note is that the designing of the fulfilling situation depends on the talent of the person-designer, but the motivating factor behind creativity is explained through this scheme.

/Here, the genius (the creator) becomes the opposite of the neurotic. Actually the majority of the creative geniuses are perfectly same and are blassed with a 'power' that enables them to favourably utilize their neurotic sensitivities (Brain 1948). Some

psychologists would like to say that the abstraction expressed as 'power in the above sentence is a gestalt where the most prominent part is intelligence. Academic psychologists have worked, and are working on the identity of this 'power'. However, a description of those attempts is beyond the scope of the present paper7.

By way of elaboration Freud says that when the wish shakes off its original sexual tone and a second socially valuable tone is attached to it, the owner of the wish then not only can freely acknowledge this wish but can also go ahead with its full ideational presentation and thence to action. Thus a skillfully arranged displacement creats a mastery over the original instinctual urge. It is a sort of triumph on the part of the ego for its successfully "diverting the sexual energy away from its sexual goal to higher cultural aims" (Freud 1908b). As mentioned before, this capacity of displacement along a socially valuable channel calls for a certain kind of skill and naturally such skill may not be present in every person. Thus, this strategy "succeeds with a minority and with them only intermittently" (Freud 1908b). This also explains why the creative talents always remain an insignificant proportion of the population. With other persons of

moderate talent this newly designed displacement situation is moderately appealing and hence would often go unnoticed.

Freud (1910) has freely stressed the fact that sublimation, that is, a "change of the sexual motive power from sexual aims to new" and essentially non-sexual "aims" (see App.) provides the "components for all cultural accomplishments". The sublimated or aim-changed energy will naturally be proportional to the original sexual energy, which means that the greater the energy component of the original instinctual urge, the greater the impetus (see App.) for the artistic creation. This proposition of Freud provides a sort of hint that can be utilized in measuring the magnitude of the creative urge.

Brills (1931), view of creativity is similar to the arthodox Freudion view. His explanation of poetic creativity as a result of successful management of oral fixation is quite applicable to the creative musicion (vocal). At the beginning of life, the infant gets all his gratifications primarily from his rhythmical breast-sucking. Gradually, as the child grows older, he is not longer allowed to continue breast-sucking. But, because breast-sucking was so

over-whelmingly pleasant, this somewhat grown-up child is not now willing to forgo the breasts either. On the face of the actual absence of breasts the individual then searches for substitutes. Compare this with the view of Freud. The ego, as if says: "Now you can no longer get your breasts, so find something else with which you can get the some sort of pleasure". And then, the ego, acting like a knowledgeable guide finds out this substitute. If the finding is such that it is at once a sucking-substitute and a socially valuable act, then it is a commendable manouvre, a successful search and hence a sublimation.

According to Brill poetry can well enough become this substitute, being "a chewing and sucking of nice words". To the present author, vocal music fits this scheme very well. So, in the language of psychoanalysis "Poetic work emanate from regression to, or fixation at" (Brill 1931) this oral phase. Translated into ordinary language this means that poetic/musical creativity is a sort of re-enacting of the early-life sucking. And because sucking was so overwhelmingly gratifying, the contemporary creative activity is also satisfying to a similar extent. In other words, the creator, to start with, derives a more or less similar type of satisfaction in his creative effort that he

once derived from his sucking. Gradually, the creative activity becomes as much satisfying as sucking was in the good old oralphase days. Then, because it is so much satisfying, the creator adds more and more polish to his act to get more and more sap out of it. Here comes the question of skill again. Only those who have the skill can adequately add this polish. Thus, gradually the product gains in magnificience, becomes more satisfying and draws more of the creator's zeal and energy. Logical enough; one invests where one is sure of the return. It thus starts the golden circle, the motivation of the creator intensifies and pushes him to the championship status. (Some residual raw orality is quite frequently seen in great musicians. The late Ostad Bade Golam Ali Khan was certainly a great eater, a connoisure of food and well-versed in the cullinary art. The pan-chewing and the drinking habits also denote the same thing).

According to Bychowski (1951) the individual creates because he <u>believes</u> that by his creation he will become "more desirable to his incestuous love-object, and the power he will attain will make up for his present weakness". Inherent in this part of explanation forwarded by Bychowski is a sense of

insufficiency, a sort of felt smallness, in the would-be creator. He feels weak (because he cannot/ has not monopolised his mother-object) and <u>knows</u> that unless he can become strong and worthy he has little chance of getting the love he so ardently desires. This explanation of the motivation behind creation has a certain pathological undertone, because it focuses some sort of hankering on the part of the individual, a felt uneasiness in the absense of love, a sort of incapacity to accept things as they are. However, Bychowski is not all set to explain all creativity through this formula alone. Thus, he further says that "the creative urge springs more often than not from less pathological sources" (Bychowski 1951) like the desire for "narcisistic omnipotence". However the main impetus for creation comes from the de-sexual-ized and de-aggressivised libido. Thus sublimation is at the root of creation.

According to Fenichel (1945), the creative activity is again a disguised expression of some anti-social, guilt generating wish. This wish, in the finished creative art, is expressed in such a way that the expression is liked by all. Thus the guilt loses its sting, because society no longer not only abhors the shape of the wish-translated-into-action, but

positively adores it. The creator feels happy because he is accepted and continues to cling onto this new technique that symbolically, disguisedly and so tectfully satisfies his original wish. Fenichel's (1946) analysis of the acting talent has brought to light the sublimation of an unconscious exhibitionistic tendency. Whereas the exhibitionistic tendency in the raw is utterly obnoxious, the acting is exactly its opposite. This hypothesis of Fenichel also explains the dancing talent.

Kohut (1957) has explained musical creativity in detail. According to him, music is "predominantly a 'cathartic' expresion" that relieves the mind. Musical expression is comparable to the "compromise formation or sublimation", where the original unacceptable wish gets permission to be expressed. This relieves tension. In this sense musical expression serves the purpose of the instinctual psyche. ("id"). At the same time, musical activity is felt as an enjoyable form of mastery. To be able to create music adds to one's sense of capability & generates a sense of value. Psychoanalytically speaking this is egosatisfaction. Further, in sticking to the grammatically correct music-form, one gets the satisfaction of being correct. This is the super-ego satisfaction. Music thus provides satisfaction

for all the three different "structures" of the total mind stuff. Going back over the scale, it seems that some sort of innate dissatisfaction is the fountain-head of musical creativity. The original unfulfilled wishes are now satisfied in the form of music - which is a welcome disguised expression, that is, sublimation. The actual transformation of instinctual impulses into musical expression is determined by a special skill. Why & how one particular individual possesses this special skill, & another does not, is once again, not explained in this theory.

Abraham (1949) has connected creativity with the "oral phase" of the child. A creative artist first becomes acquainted with all the information in his field of interest; he, as if eats up all the "food" that is there. He them digests these various informations. That is, the existing bulk of information becomes his own; these are assimilated into his system, & only then he produces the unique. This incorporation of knowledge is comparable (according to Abraham) to the child's incorporation of the (mother's) milk. The more a particular child had once relished his milk incorporation the more is his chance, in later life, of going for the same, symbolically. But the opposite is also true. This means that a child who was not

satisfied with his milk incorporation will also try for the same, literally (that is with milk, food) or symbolically (that is with knowledge). And then, if he has the skill & capacity to digest the incorporated milk-symbol (i.e., information), he will be able to produce creative magnificience provided he has skill also in this latter part of the game. Sublimation happens when one switches from milk-food incorporation over to knowledge-food incorporation. This change over from food to knowledge is actually a change over from the crude to the symbolic. The nature of symbolic material being valuable, laudable & worthy, comes to be known as sublimation. However, more research is necessary before one can say why & how it is that one individual has this duplex skill & the other has not.

Alexander (1948) holds, somewhat differently from Freud, that creative activities result from surplus libidinal energies that are no longer required for the services of the biological needs of the organism (that is, growth & surirval).

Alexander (1964) has further elucidated that creativity is the "urge for mastery of tension-creating situation, be it conflict with external reality, internal conflict or the struggle for greater mastery

of the faculties of the body & the mind.

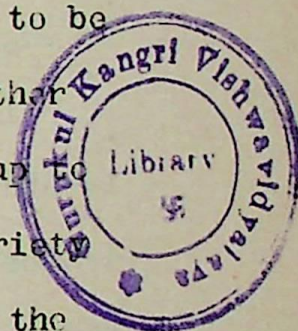
Bergler (1945, 1948) says that Freud's theory of sublimation as an answer to creativity needs further elucidation. He finds fault with Freud that the father of psychoanalysis did not elucidate the mechanism of sublimation beyond stating that it has a certain biological basis (e.g. pain avoidance). According to Bergler (1945) sublimation proceeds through five different steps. Without going into the details of Bergler's formula it can be said that for every wish or wish-cluster, felt by the owner as unfit for ideational presentation, there is a "super-ego reproach" (Bergler 1945) and hence a defense. This cycle then continues, which means that there is a fresh super-ego reproach against this defense itself. In the end there is a compromise which is then sublimated. Thus "what is sublimated is neither the id wish nor the defense against the id wish, but the defense against the defense against a conflict originating historically as an id wish. Sublimation is, therefore, not the child, but the modified grandchild of the original conflict" (Bergler 1945). The roots of the real conflict, Bergler found from psychoanalysis of more than twenty creative geniuses, lie at the oral stage of development (Bergler 1947).

Many other well-known authors have also accepted sublimation as the root-factor of creativity. Individual authors have slightly modified the scheme, process and incentives for sublimation, but the main point still remains the same, that is sublimation (Deri 1939) of mainly libidinal drives.

Creativity as a Restitution for the Aggressive Impulses

This type of theory thrives on the hypothesis "that art creation consists in the unconscious restoration of persons destroyed in phantasy" (Levey 1940). Such destructive impulses were originally directed against the mother. The basic concept behind this kind of formulation tallies with Klein's postulates (Klein 1948, 1949). The theorists belonging to this group believe that every child, at some point of his life, has to feel hostile against his mother when she throws the baby out of the paradise of her maternal care into this world of reality. To the mother this is not necessarily an act of aggression, but part of a conditioning, a teaching, that has to be done for the good of the child. To the child, however, this is a shock. The motherfigure then becomes hostile. The rueful child, himself then turns hostile against the mother. In phantasy, he then wants to destroy his

mother. He forms a notion that the mother is bad. His hostility is then projected onto the mother. The mother becomes worse. The child becomes more aggressive and hostile. Thus, according to Klein, this vicious circle continues. Creative activity achieves a breakthrough. By successfully creating the beautiful, the adorable and the valuable, the child symbolically recreates his destroyed mother and gets relief from his pain and suffering.

Roughly speaking, the human kind can be divided into two groups on this factor. To one group, this phenomenon of rejection by the mother appears to be too severe, stunning and horrifying; to the other it is a shock no doubt but it does not catch up to that level but is relatively mild. A wide variety of innate and environmental factors determine the quantity of this mother-shock. The first group, as a consequence of the greater shock, suffers more. To the second group, the suffering is also less severe. Thus, naturally enough, the first group will have more urge to do something about it than the second group, that would somehow try and be able to live with its moderate tension and guilt. The first group, then either becomes a creative genius by successfully negating the hostility or falls prey to its own poison.

So it is only one fraction of the first group that has hope to emerge as successful creators. This means that the creative activity is actually a successful manoeuvre that saves one from disease (psychosis). It is like either you create or be destroyed in your own poison. Naturally, the more intense the poison of aggression, the greater are the chances of being a psychotic, or, if channelized properly, of being a creator. Those in the first group who have the "skill" will create and live a life of glory and those who do not have this "skill" will go on living a life of an abysmal agony of soul.

Let us now consider some illustrations. According to Sharpe (1930), the would -be artist felt hostility against his mother when she ceased to take care of the baby in the same fashion that she used to, when the baby was a neonate. The baby, wanting a continuation of the early neonatal type of care and love, and finding its absence, turns hostile against the mother. This, in its turn generates guilt and fear, and is promptly repressed. But, the anxiety persists as an undercurrent. In artistic creative activity, there is "a bringing back of life, a reparation, an atonement, a nullification of anxiety" (Sharpe 1930). In the work of art, the artist symbolically re-creates the

image of the mother that he once had destroyed. The more the perfection of the creation, the more the felt sense of atonement, the more the consequent pleasure (freedom from the sense of misdeed), and the more is the inpetus. But perfection would depend upon the skill of the creator. How come this skill is present in one and absent in another ? The question remains unsolved here.

Then, Fairbrain (1938) offers a more or less similar explanation. He also focuses on a sort of sublimation of destructive impulses.

Fairbrain starts his descriptive explanation of creativity by comparing the work of art with the manifest content of dream. "The repressed phantasies of the artist" express as the art-form, as the "latent content" of the unconscious appears as the "manifest content of the dream". Thus the repressed is like the raw-material from which art forms are fashioned.

However, there is a difference between dream production and art production, in that, the former is just a hallucinatory presentation of the repressed, whereas the latter is also a "product of motor activity. Then comes Fairbrain's special comment that the tension-producing repressed material mainly consists of the destructive urges. It boils down to the fact that

"the principle of restitution is the governing principle in art" (Fairbairn 1938). The restitution phantasies offer freedom from guilt, tension and anxiety and makes the artist cling to his creation, But, one can create only as far as his skill goes. Fairbairn does not explain why and how one has the skill to bank upon and the other has not.

Lee (1947), another expert belonging to the restitution group, says, "the various esthetic states of mind occur.......in order to relieve acute psychological emergencies, due to the activation of destructive rage which is not being effectively repressed....". With Lee, also the destructive impulse is essentially that against the mother. Invariably, such an urge arouses guilt and fear of losing love. The aggressor then begins to suffer. Whereas a neurotic will lead his life of suffering and suffering alone, the would-be creator finds, in his (artistic) creation, a meaningful way out. The artistic activity is "at once a denial of destructiveness and a mode of identifying oneself with the ideals of one's mother", (Lee 1950) the one-time object of his destructive urge.

Grotjahn's (1957) view also fits the general framework of restitution. He starts his formulation with a comparison of the creative personality with

the neurotic personality. The neurotic symptoms and the artistic creations are both the same, being "defenses" (reaction formations) against anxiety; but there is a fundamental difference. Whereas the neurotic is afraid of his anxiety and shuns from handling it, the artist is not afraid of his anxiety but is capable of facing it, handling it and creating the magnificient with it. "In contrast to the neurotic", says Grotjahn, the artist "develops not a symptom but an interpretative expression".

The urge which originally gave rise to anxiety (and was transformed into the impetus for the creation) is, acceeding to Grotjahn, a "destructive trend, is an early infantile episode". This idea is essentially similar to Kleine's (1948,1949) rejection of the baby by his mother. The average person accepts this reality, but the artist recreates the destroyed object, thus atoming for the destruction" (Stein and Heinze 1960). So, creation is "a kind of atonement for the original aggressive trends. The artistic transformation is an attempt at restitution, restoration and love" . (Grotjahn 1957).

In Rickman (1940) we also observe the same tone of explanation. Our wish to destroy our loved objects generates shame, guilt and horror in our minds and then we

counter that ugly wish by creating the beautiful.

Creativity as a Compensation for Inferiority

Adler's theory of personality (developed during 1911) focuses an universal urge for compensation for an actual or imaginary inferiority (Adler 1964). Every child feels inferior and small before his parents who are much bigger, both literally and figuratively, than the child. This creates the basic inferiority in the mind of the child. Then, of course, there may be various other inferiority feelings originating from different social and personal causes, including organ inferiority. Such inferiority directly produces a feeling of uselessness and fear in the mind of the child. The child then tries to get over this feeling of uselessness by developing a life-style that appears to him as useful. "In our view, a man of genius is primarily a man of supreme usefulness" (Adler 1964). The poet and the musician, more than anybody else, are persons of supreme usefulness. "It is they who have taught us how to see, how to think and how to feel".

Adler has exphasized the value of social usefulness in his theory. Compensation always aims toward creating a socially useful personality pattern. The end result of creativity, that is, successful

compensation, is something of value to the society.

Adler has ascribed the motivation of some creative poets to fear arising from early-life experiences of illness and death. Compensation can meet and outwit such fear by living in such a way through enduring contributions of social value that its influence will be perceived in future.

Ansbacher & Rowena (1956), two prominent Adlerians, has explained the "style of life" of the creative genius - that is, the creative power of the creator - as essentially consisting of "the desire to develop, to strive, to achieve and even to compensate for defects in one direction by striving for success in another".

According to this group, the genius often starts in life with imperfect physical organs. Even when not real, they might believe in the existence of an imaginary organ defect and start to overcome then by training themselves hard from early childhood. "From this early training we can conclude that their art and their genius was their own creation, not an undeserved gife of nature or inheritance".

Creativity & Personality Types

Jung (1946) has conceptualized eight different categories of personalities on the basis of combination of his four "functions" with each of his two general attitudes toward life, viz., extraversion and introversion. The attitude of extraversion orients a person to the diversities of external world, whereas the introversion attitude to the subjective world. The four functions refer to four different types of psychic activities. They are : (1) the thinking type (2) the feeling type; (3) the sensing type; and (4) the intuitive type. Thus there may be the extraverted thinking type or the introverted thinking type; the extraverted feeling type or the introverted feeling type, and so on. Of course these are not absolutely watertight compartments and one personality can glide over from one type to another and then glide back. But, to Jung, every individual has but one dominant combination type-tone (pattern) that shapes his life and his meaning of existence.

Thinking is the intellectual function. The extraverted thinking type deals with data and facts. He utilizes his intelligence in shaping external data and ultimatily becomes as much productive as

his intellectual capacity will allow. He is the scientist, the empirical champion, the discoverer of new laws of nature. He readily gets name and fame because his products achieve concrete visible form.

The introverted thinking type's intellection stems from subjective factors. He is concerned with inner ideas as contrasted to facts. He creates new theories and because of his superior merit these new theories are ultimately proved to be correct, useful and valuable. The philosopher belongs to this group.

Feeling is the valuing function. The extroverted feeling type "flock to the theatre", the music conferences and to the religious congregations. They create new fashions and support socially valuable enterprises "with correctly adjusted positive feelings". The introverted feeling type is not very eager to be bodily present at a cultural function but he wholeheartedly wants such functions to happen and continue. This type manifests their "creativity in intimate poetic forms".

Sensing is the reality function. The extraverted sensing type perceives external objects - that is his aim of life. "To sense the object is his constant motive" (Jung 1946). He is a jolly fellow, with a

flair for a good musical piece, a captivating landscape or a properly cooked and served dinner. In the introverted sensing type, the external objects release his subjective responses, as it happens to a painter, and to the renderer of a musical piece who dors the rendering in a manner befitting to the situation.

Intuition reaches the core of the things perceived and draws out the essence of the perceived objects. The extraverted intuitive type "has a keen nose for things in the bud, pregnant with future promise.... his eye is constantly ranging for new possibilities". (Jung 1946). Thus he is not satisfied with stable conditions. In interpersonal relations he can "make" man and inspire him. The introverted intuitive type, in contrast, has a keen regard for his own fantastic images and ideas that may not be parallel to any of the objective facts and situations. "If an artist, he reveals extraordinary, remote things in his art....both the significant and the banal, the lovely and the grotesque, the whimsical and the sublime". (Jung 1946).

According to Jung (1928), art work can be produced by an extraverted as well as by an introverted personality. In fact, all the eight types described above can become creative artists. Further, one artist can create, once under the influence of extraversion, at

other time under the influence of introversion. While creating under the influence of extraversion, the artist "stands as it were beneath his work... as though he were another person who had fallen within the magic circle of an alien will" (Jung 1928). In his creation, this type, as if, obeys some foreign impulses that lead him by force. While creating under the influence of introversion, the artist starts with a deliberation to produce some specific effect. Here the artist is in full control of his materials with which he is going to create.

Jung is set against any explanation of creativity in the Freudian reductive manner. Persons capable of creative work belong, according to Jung, to a separate group, in their ability to utilize their conscious and unconscious. The unconscious, here, is not merely the repressed but also the "dispositional tendencies" acquired as philogenetic traces - the "archetypes". In creative work there is an interaction between the conscious and this unconscious, resulting in an animation of the "archetype". Some sort of psychic energy draws up these unconscious elements on to the surface. This is described as a "transcendent function" of the personality, that aims at the realization of

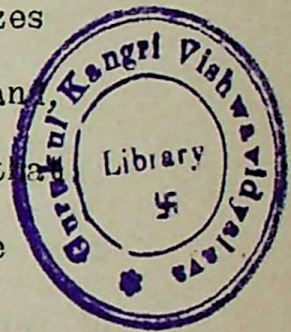
man's potentialities. Thus the creative process stems from an unusual psychic motice; it is an "autonomous complex" and is "supra-personal". As no early life happening could have determined the unleashing of this motive power, it is futile to search one's childhood for the same.

Conclusion:

The foregoing descriptions are (as pointed out earlier at the beginning of this paper) but some samples of the various psychoanalytic explanations of creativity. There certainly are many other well-known views with similarities and differences of concepts here and there. Inclusion of all these would have made this paper too lengthy and tiresome to the listner (reader). Moreover, it is not really necessary to know the views of each one of the psychoanalysts. The above is enough as a representative of the psychoanalytic trend of explanation of creativity.

We have seen that those who explain the creative activity through sublimation of (libidinal) impulses and those who explain it through the principle of restitution for the aggressive impulses throw light only on how some portion of the mental energy could

possibly have been directed from one form of expression to another. In the case of the creative artist, this "another" form of expression is such that it is considered to be valuable, pleasant and useful to the members of the society.

Now, what is the crucial factor that channelizes the instinctual energy into the creative path ? The answering cry "skill" is but a word. More research is necessary before one can adequately define the nature of this skill (special ability); how it actualizes itself in one individual and fails in another; and, further, what is the exact nature of the skill that creates one particular type of super-nova to the exclusion of other types ?

Brain (1948) holds that the musical genius (skill) is inherited; that the essential factors of inheritance, among other things, are capacity for note discrimination.

A comparatively early author Bentham (1929) has observed that strong auditory and kinesthetic imageries are essential for the creative musician. (The latter is required for the mastery of the rhythmical part of music). But she does not go into details of how one becomes the possessor of these imageries in such an extraordinary proportion; whether it is inherited or acquired.

Sir Francis Galton (1870) believes in hereditary genius. (He had worked with different types of geniuses including musicians). One critique of Galton, Constable (1905), has stressed the importance of environmental factors as against inheritance. Constable has even accused Galton of distorting facts in favor of his (Galton's) point. Many others (e.g. Adler) believe in the influence of environmental factors. For example, according to Pinchas (1968) "the language of music is derived from preverbal, infantile auditory com unication". Pinchas "emphasizes that the elements of music (tone, pitch, timbre, duration, rhythem, and intensity) are all components of infantile preverbal auditory communication". Thus musical ability seems, according to Pinchas, to be acquired. In this way, many other works can be cited in favor of each viewpoint.

There is also a third group occupying an intermediate position that believes in an interaction of heredity and environment in the production of the creative personality. Cattell (1915) is an well-known representative of this intermediate position.

Looking at the creative musicians of our country we find cases that support (roughly speaking) all the three stands stated above. There are numerous examples of the musical talent running down along

direct lines, from father to son to grandson; as well as along indirect lines, from uncle to nephew. But whether this proves hereditary transmission and that alone, remains undecided. Here is as much heredity as environment influence. Actually the musical lineage proves as much Galton as Cattell and Pinchas and Adler.

Then, the psychoanalytic theorists, working on the identification of the power behind creativity, have never categorically said that the ability for sublimation, or the "restitution" or the ability to make compensation for inferiority is hereditary. Nor have they categorically emphasized the other view. Thus, excepting for Jung, who seems to be more or less in favor of disregarding environmental influences in the making of the creative personality, the other workers have not so much concentrated on this aspect. More research is necessary before one can arrive at a conclusion.

However, I think it is fruitless to search for an answer to the heredity-environment riddle, especially for the creative musicians. Because there is no such person who is really the creative musician. We the Indians believe that music was first created by

the Supreme Lord. Then the personage who created the first rhythmically bound narrative (Sloka), the immortal Valmiki was no less than a realized soul, (Brahmavid) which means that he was the professor or all wisdom. The Rsis (   ) who envisioned the Sama-Sutras, being realized souls, also possessed far more widsom than any one whom we may designate today as the creative artist of even the first order. In this context, what should be the proper attribute of the campions of (Hindusthani) music ? The creator, really, or (just) the magnificient renderer ? I close this paper with this question before you. "Is it really possible to create (Hindusthani) music, even for the most talented person possessing all the required qualities described in this article?"

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APPENDIX

Sublimation is "(1) deflection of the instinct from its original aim; (2) deflection of the instinct from its original object; (3) gratification of the instinct by means of activity having a more acceptable social or cultural value than that of the original form of expression" (Deri 1939). But "how and in what sense this substitution takes place is far from clear". (Roheim 1943).

The meaning of the term "instinct" need not be discussed here. The term conveys some sort of meaning even to those who are not well-acquainted with Freud's concepts. It is sufficient to say that "Freud conveived of the instinct as a 'borderline' concept, between the mental and the organic spheres" (Mack & Semrad 1967).

"The aim" of an instinct "is any action directed toward satisfaction......such as the infant's activity in seeking the nipple. The object is the person or thing which is the target for this action". (op.cit.)

MUSIC AND MENTAL RETARDATION

USHA RAM

Mental retardation is popularly understood to be a condition where the individual's intelligence is below normal. The term mental retardation not only connotes subnormal intellectual level, but also an impairment in the adaptive behaviour. The development of these particular factors is retarded since the developmental stage itself.

As far as the intellectual status is concerned the following classification could be referred to: $\frac{1}{2}$

Idiot	: 0-30	
Imbecile	: 30-50	Trainable.
Moron	: 50-70	Educable.
Boderline	: 70-80	Slow learner.
Dull normal	: 80-90	

Whittington[1] reports from his study of 24 boys each of musical and non-musical groups from secondary schools that the correlation of performances in musical tests with matrices intelligence tests was significant but not high. Hence we have cases of musical talent available even among the mentally retarded. Musical talent was found in a 13 years old boy in a school for the mentally retarded. This case was studied and it was concluded that the ability traced was due to an aversion to all school influence

rather than to mental deficiency.[2]

Music talent is not uncommon among the mentally deficient. A brain damaged adult male is reported to have exceptional musical talent, and superior rote memory of an apparently eidetic nature. The subject's IQ according to Stanford - Binet was 67, and the WAIS IQ was 70.[3] Another very interesting case is reported by Viscott[4] of an idiotsavant whose history reveals that she was isolated from the rest of her family and placed in a crib next to the piano where her mother taught music. She was endowed with a very strong memory and could identify almost any major work of symphonic music. She had absolute pitch, played piano and violin, could change keys in the middle of a piece without lsoing a beat. She lacked abstract thinking ability in any field except music.

That the mentally retarded are sensitive to music is evident from studies where the mongoloid and normal children have been compared. It was found that the younger Subjects, both mongoloid and normal, responded to disonance to a greater extent than the older. The responses of all the subjects to orchestral and piano music was similar. But on the whole the normal and mongoloid children do not respond to music in the same way.[5] The mentally retarded also respond to rhythm by clapping and rocking. In this study it was found that the Mental Age of the clappers was higher than that of the rockers.[6]

Alvin's[7] atudy of the responses to music shows that music proved to be a means of communication with the school-going mentally retarded children. The response was physcial through rhythmical or imitative movements, verbal and emotional. Social integration, development in sense perception and an increase in the span of attention was noticed.

"The perceptive aptitudes of mental defectives regarding music and more specially regarding musical rhythm" was investigated by a series of elementary tests. The author[8] concluded that the rhythmic aptitude of the mentally defective and the normal children of the same Mental Age are similar but that the former are inferior to the Subjects of the same Chronological Age. The musical aptitude has been found in the educable mentally retarded by a study conducted by Bixler.[9] The musical aptitude profile is valid for use with the educable mentally retarded though the factors responsible for the delayed development must be explored. An earlier study[10] showed that the expressions of the cerebral palsied* children though full of errors and of poor quality indicated that the aptitude in itself was by no means inferior. The author also found a correlation between musical aptitude and test evidences of intelligence.

The effect of music in educating the mentally retarded children has been studied by Staples.[11] and it shows that the

*Paralysis of the brain, which generally results in mental retardation.

isorhythmic mediators facilitated the learning of 9 paired - associate tasks involving nonsense - syllables. Cameron[12] has suggested that the use of music instruction may enhance the learning ability of the retarded. Through the social encounter in a one-to-one relationship with the music instructor "many social and disciplinary skills will be practised and promoted".

It has been found that simple songs which call for considerable repotition and dancing made remarkable improvement in speech rate and diction, in poise, in dexterity, freedom of movement, sense of rhythm. It increased the opportunity for learning social information and developing a vocabulary. Finally it proved to be a thereapeutic outlet.

Music has been used for the modification of behaviour. Cortazzi[14] studied the effect of music on the behavioral problems of 12 female adults with IQ below 25. Her attempt was at reinstating these subjects in the normal hospital setting. The subjects participated in music activities for an hour per day for 9 months after which the introducting of primary school activities followed. At the end of 4 years 4 subjects proved to be complete failures while 4 subjects integrated success fully in an occupational therapy unit as full-time members of the hospital. 4 Subjects though requiring attention, 'were (a) able to accept relationship with some equanimity, (b) beginning to learn from each other,

and (c) showing an increase in concentration span'.

A study[15] carried out in 1971 eoncludes that music could be a potential reinforcer for a variety of behaviour in many different situations.. The music can be presented and withdrawn immediately depending on specific responses; the music is played till the behaviour lasts. The effect of this method was seen in the decrease of the hand movement and rocking behaviour in a profoundly retarded child where verbal stimuli and preferred music functioned as reinforcing stimuli.

Numerous studies have been reported on musical elements like rhythm, melody as means used for reaching therapeutic goals outside of the aesthetic phenomenon of music. Zu Stolberg and Kerkhoff[16] describe how gymnastics were added through rhythmical-musical exercises. The mentally retarded children were taught songs where the metric concentrations are coupled with the body impact. Behavioural changes and general responsiveness of the mentally retarded children with the aid of music has been studied. The music ranged from very simple rhythms and beats, to more complex and free flowing rhythms, singing, dance movements to music and listening to sound. Interest and concentration were noticeably increased. Improvement in vocabulary, responding with words, music, dance, parts of the body, social greetings were observed outside the music sessions.[17]

Instrumental performance has been studied to have the following values for the mentally retarded : as physical therapy,

it helps muscular strength; as a restorer of physical function, compensation, it aids in personal adjustment; as communication, it encourage social interaction; finally it promotes social development and adjustment.[18]

From various studies it could be stated that music is an important factor in the handling of the mentally retarded. Besides being a medium of communication, providing the individuals an opportunity for immediate satisfaction by allowing the direct, safe and constructive discharge of emotion through sound, music has provided sensuous pleasure to some children. Encouraging them to paint to music gives them an opportunity to express themselves through another medium of design, colour and movement on paper. "For all, the fact that there is no 'correct' response in this situation fosters free expression and active fantasy."[19] (Quoted by Bialer).

Not mush work has been done in India on the subject of music in connection with the mentally retarded. The gradual recognition that mental retardation is gaining here today calls for research inthis particular field of music, too. If these children could be given any training in music, it would be indeed be an interesting addition in the rehabilitation programme. It would then become one of the ways of helping them to feel more one with their fellow-creatures with better fortune.

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MUSIC THERAPY

C.G. DESHPANDE

Some therapeutic procedures have been systematically developed and well accepted by clinical psychologists and psychiatrists for the treatment of mental disorders. But there are number of other procedures in the hospital settings which are considered as aids or adjuncts to the main therapeutic techniques. To mention a few, bibliotherapy, audio-visual aids, dance therapy, occupational therapy, social events, athletics, music therapy, art therapy are the main psycho-therapeutic adjuncts which are in vogue.

There are many connotations of the term 'music therapy'. First, the word music refers to both instrumental and vocal types. Second, the word music is a broader term in that it includes salo songs, chorus, orchestra, and such other activities. Third, music therapy is a form of group therapy. At a time it is used for number of patients. Fourth, many a times it is used along with other types of adjunctive therapies like dance and art therapy. Fifth, now-a-days it is considered as a form of recreation therapy.

Music has been seen to produce melancholy, move people to tears, excite man to martical deeds, or bring about a state of ecstasy. It can influence the disturbed patients way of feeling and thinking by programmes carefully selected for his special needs and those of the group he is with. Jqedicke holds the view that music, like dance, affects the organism through the autonomic nervous system probably to the level of the collective unconscious beyond the reach of visual images, words or meditation. It is used to stir up deep latent conflicts, and lead them in the direction of resolution.

Music Research Foundation of America, dedicated to music therapy, is attempting to exlore the depth to which music penetrates the minds and whether different kinds of mental illnesses show significantly different preferences for music.[2]

Friendlander believes that music, with its roots in rhythm, is related to the id and the unconscious as well as to the emotional elements and sensual experiences within the ego. He further adds that this relationship with id would help music as a therapy.[3]

The first trace of music therapy is found in the treatment of Mesmer. He never used the term music therapy, though muted music always formed an adjunctive part of his treatment called Animal Magnetism.

Schultze and Krack studied the role of contemplation in a music therepy group.[5] They analysed contemplative as an active relaxation. They considered contemplative listening as an "acting-in" activity which could be used successfully by therapist to hasten the recovery and resocialization of their patients.

In recent years music therapy has a wide range of applications. It is used for emotional and behavioural problems, for the treatment of handicapped, mentally retarded, alcohoeics, neurotics and psychotics like schizophrenics. It has also shown its efficacy for brain-damaged patients.

Thorpe and Schmuller maintain that music in some form should be included in the curriculum of children. It helps in establishing rapport with young pupils.[6] They further add that the performance on a musical instrument may serve to

improve muscular coordination and lead to added poise and self-confidence.

Diephouse found that after listening music children could let their fantasies and fears. They had to talk about them by telling a story which could release some of their pentup emotions. The music therapists role is that of a sympathetic listener.[7]

Podolsky has evolved a list of musical compositions and stated that it could be used to counteract various emotions such as hatred and jealousy. He has further suggested the appropriate types of music for various psychiatric conditions.[8]

Rhythmic movements and musical compositions or musical expressions have been successfully used as a method of psychotherapy. Haberline and Perll used groups of from 6 to 12 children, aga 8 to 15, and claimed that it could be done with much younger children.[9] The children took or made up a short text, invented a melody for it, found appropriate accompaniments on various instruments, often beginning with clapping of hands. They then looked for expressive movements to go with the composition. They all participated and took turns in various parts.

Music has been used as a therapy for children with speech and hearing problems. Kaplan Max carried on his work in the University of Illinois.[10] 40 children of age between 12 to 17 attended the six-week training session. 22 of these children were hard of hearing, 13 with cleft phlate and 5 cerebrally-palsied. It was found that the music (Singing, playing of instruments, listening, rhythms, and games) had contributed to the objectives of providing recreation. ...

as a part of the total speech therapy programme and in giving the child something in which he could develop some skill and successful experiences that would build up some measures of self-confidence.

Josepha has used instrumental performance for severely handicapped children.[11] He found it to help increase muscular strength and joint motion and to restore physical function. He also noted that such a performance was useful for personal adjustment, social interaction and social development.

Therapeutic use of music in the treatment of the aged has been made by Alex Shapiro.[12] He found that assignment of a rhythm instrument to each patient onthe basis of his physical needs and preferences helped to relieve some of the stiffness of arthritis, encouraged muscular movements and led to personal satisfaction. Ear training provided exercises to improve the patient's memory and concentration. Mental and physical stimulation could be provided by playing the electronic organ. He also made use of group song therapy which enabled the patients to analyze the lyrics of selected songs and indirectly to verbalize their anxieties and hostieities.

There are various studies stating the therapeutic usr of music for mentally retarded individuals. Miller combined pocms with music and treatment was continued for a number of weeks.[13] The following improvements were noted: 1) Considerable improvement in speech rate and director; 2) Undeniable therapeutic outlet; 3) Improved poise; 4) Increasing assumption of responsibility and initiative; 5) Improved dexterity, freedom of movement and sense of

rhythm; and 6) Increased opportunity for learning social information and developing a better vocabulary.

Wendelin emphasized the need for music education programmes in institutions for the mentally deficient.[14] Lathrom used music therapy with institutionalized retarded children and adolescents. He found the change in adaptive behaviour in the areas like socialization, strengthening of compulsive defenses, and general level of stimulation.[15]

Viscott has described a case of musical idiot savant.[16] The patient was a 40 year old woman who became mentally retarded after she met with an accident. Subsequent teaching by her mother made her able to give the day of the week for any date between 1920-1970 with 95% accuracy and to identify almost any major work of symphonic music with key, opus number, and vital sketches about the composer. She had a sense of absolute pitch, could play piano and violin, and could change keys in the middle of a piece without losing a beat. She was able to play a melody in the style of any given composer. Although she was not able to think abstractly in other areas, in the area of music she performed abstractions difficult for a serious music student.

Zanker and Glatt have studied the influence of music on groups of alchoholic and neurotic patients.[17] They conclude that patients exposed to music as an adjunct to psychotherapy should be closen on the basis of common musical interest rather than a common psychiatric diagnosis. They also found that an artists personality is of majour importance in contacting patients. In another study they administered a

questionnaire related to musical items and found incongruous

responses in both, but with greater frequency in the neurotic group.[18]

Music has been used combinedly with other therapies or separately in the treatment of schizophrenics. The notable Indian study is from the National Institute of Mental Health, Bangalore. Group discussion technique and music were used for two male groups and a female group of schizophrenics. Murthy and Satyavathi found improvement in the adjustment of patients.[19] In their other study they used group activity which included bhajans, group games, dramas, music competition, sports and other entertainment programmes. Group activity was conducted regularly for few months. They reported improvement in the mental illness of the patients.[20*]

An imprortant study is concerned with the improvement of a catatonic patient. Ishiyama reported that the catatonic woman responded with significant changes in eye blinkings to the mother-love of lullabies.[21] Eventually, she became verbally communicative with the therapist.

Music as an adjunctive therapeutic aid has been used by some investigators in case of brain-damaged patients. Fields treated 28 severely disabled adult brain-damaged patients.[22] His observation was that 4 failed to respond while the other 24 increased their capacity for purposeful movement. He states that prior to the use of music therapy three factors should be taken into account. 1) Knowledge of the pathology and prognosis for improvement of the patient; 2) Knowledge of the components of music and ancillary disciplines that can be manipulated to meet specific problems

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A pilot study of response to raga-s Bhairav and Mayamalaraganla by nenrotics were carried out in October, 1975 [illegible] K. C. Virmani at that Institute.

and 3) cooperation of the treatment team. Improvements in motor coordination among 24 of the 28 patients treated suggest the value of using music as an adjunct in medical treatment.

Weigl used music as an adjunctive therapy in the training of children with cerebral palsy.[23] He treated 22 children of cerebral palsy of age 4½ to 11 years and found varying degree of physical improvement among them.

Music therapy though in an adjuctive form is useful for number of reasons. 1) Through music patients can indirectly verbalize their anxieties and hostilities. Music can stir up deep latent conflicts and lead them in the direction of resolution. The experiences with music are said to include the release of energy, keeping the individual occupied and easing tension. 2) Musical therapy is useful for discovering the musical talents among patients for vocational purposes. Schoenberger maintains that both group and individual forms of music therapy can be used for rehabilitation process.[24] 3) According to Podolsky, music therapy, besides its therapeutis use, is useful to lessen the management problems for all types of hospitalized mental patients.[25] 4) Pefformance an a musical instrument may serve to improve muscular coordination and lead to added poino and self-confidence. 5) Music therapy provides a sense of accomplishment and develops group consciousness and a feeling of belonging through participation in band, orchestra, chorus, etc. 6) It is useful for patients who do not trust words as a medium of communication.[26]

The main limitations of music therapy are that it is

not useful for those who are non-cooperative or detached

from reality. It also becomes ineffective for those who lack in musical appreciation.

Though I have discussed various uses of music therapy, I may draw attention to the statement of podolsky who has aptly described the present status of music therapy. He states that it is still in its infancy and the experimental stage; and further adds that there is still a great deal to be done before music as therapy can be established on firm ground.[27]

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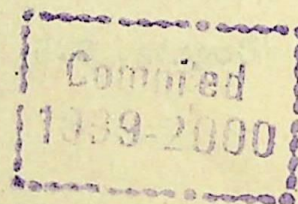
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